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# FEATURES


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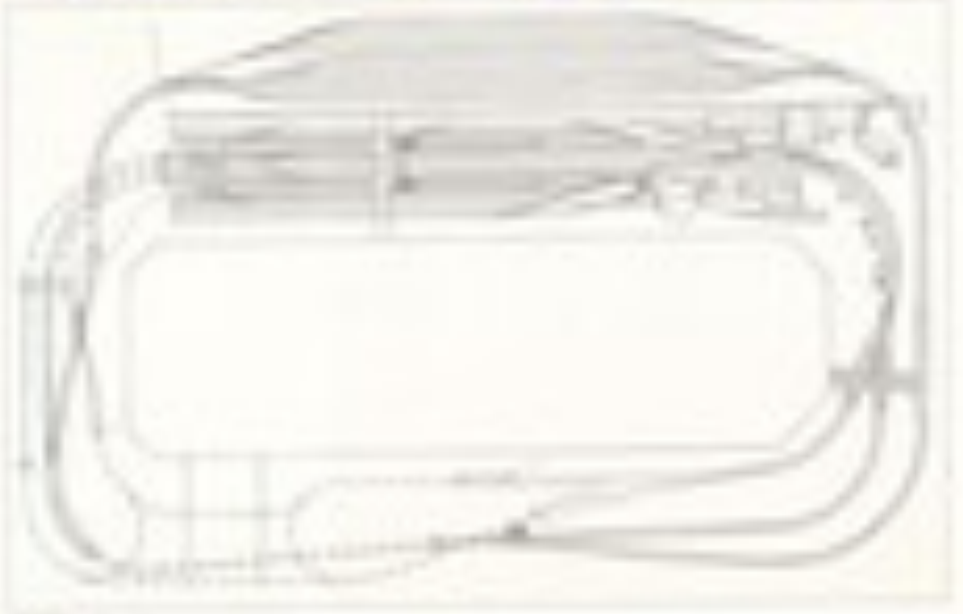
# Railway of the month

## LOFTHOUSE

Watching the trains go by in N scale

Open fells, a desert station, outings, tunnels and unscheduled stops around every corner



# TWO N SCALE BOX CARS

By Keith M. Kirkbride

Prototype photos from the collection of James Eager

**N scale freight cars can be all fixed up realistic as their HO scale counterparts, but you will need to make a few modifications, even to the better models. Here's how Keith Kirkbride upgraded and detailed two Micro-Trains 50-foot box cars to duplicate specific prototypes.**

The Pennsylvania Railroad produced over 1,000 cars of X-31 50-foot double door box cars in three major groups from 1952 to 1957. The purpose of the modern steel car was to move more pieces by placing automatic coils in the car so they can ship without dunnage and removing extra rail size door openings to the floor of the car. These cars were numbered in the 472000-472574, 500000-500499, and 481250-481749 series.

Some of the cars in the groups that

## Modeling The CNW Wuffle-Side 50-Foot Box Car

## Weathering N Scale Freight Cars

# PROOF OF THE PUDDING

## A report from Eddury, Southern Railway

Historical justification and new works on the author's upgraded 7 gauge SR garden line.

**Detail of the roof, showing the curved line of the edge of the roof and the water drainage**

**Below: the building as a whole seen from the south-west, with the main entrance on the right**

**Photographs by the author**

Mathematically there are no curves between straight lines and the two-dimensional surface which is formed by the straight lines is called a ruled surface. The simplest ruled surface is the plane. Other ruled surfaces are the cylinder, the cone, the hyperboloid of one sheet and the hyperbolic paraboloid. The hyperbolic paraboloid is a saddle-shaped surface which is formed by moving a straight line parallel to a plane in such a way that it always touches two straight lines which are not in the same plane. The hyperbolic paraboloid is the surface which is used for the roof of the Sangallo Restaurant.

The Sangallo Restaurant is the first hyperbolic paraboloid shell roof to be built in Britain. The roof is a single shell of reinforced concrete, 3 inches thick, supported on four edge beams. The roof is carried on four reinforced concrete columns at the corners of the plan. The edge beams are prestressed by means of steel cables which are tensioned after the concrete has hardened. The cables are anchored at the ends of the edge beams and the tensioning forces are transmitted to the columns. The prestressing of the edge beams reduces the bending moments in the beams and columns and also reduces the deflection of the roof under load.

The construction of the roof presents practically no difficulties. The shuttering for the roof is made of timber boards, 1 inch thick, which are laid on timber joists. These joists are supported on timber trestles. The trestles are also made from timber. Temporary or demountable steel trestles could be used instead of timber trestles.

The reinforcement for the roof is placed in position and the concrete is then placed in position. The concrete is compacted by means of vibrators and is finished off to a smooth surface. The shuttering is struck after the concrete has hardened sufficiently. The prestressing cables are then tensioned and the ends of the cables are anchored to the ends of the edge beams. The ends of the cables are then concreted over to protect them from corrosion.

The roof is waterproofed with a layer of bitumen felt. The felt is laid on the concrete roof and is covered with a layer of gravel. The gravel is held in position by means of timber battens which are nailed to timber fillets which are fixed to the concrete roof. The battens are arranged in the form of a square grid. The gravel is placed in the squares formed by the battens. The battens are then removed and the gravel is left in position.

The roof is drained by means of a gutter which runs round the edge of the roof. The gutter is formed by a timber fillet which is fixed to the concrete roof. The fillet is covered with felt and the felt is turned up at the edges of the gutter. The water from the gutter is led away by means of a pipe which is connected to the gutter at one corner of the building.

The roof is supported on four reinforced concrete columns which are placed at the corners of the plan. The columns are 12 inches square in section and are reinforced with four vertical bars and links. The columns are carried on reinforced concrete foundations which are placed on the ground. The foundations are carried down to a depth of 3 feet below ground level.

The roof is prestressed by means of steel cables which are placed in the edge beams. The cables are tensioned after the concrete has hardened sufficiently. The tensioning is carried out by means of hydraulic jacks which are placed at the ends of the cables. The cables are anchored to the ends of the edge beams by means of wedges. The ends of the cables are then concreted over to protect them from corrosion.

The prestressing of the edge beams reduces the bending moments in the beams and columns and also reduces the deflection of the roof under load. The reduction in the bending moments in the columns allows the columns to be made smaller in section than would otherwise be necessary. The reduction in the deflection of the roof under load allows the roof to be made thinner than would otherwise be necessary

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# MODEL HICKS CORNERS GRAIN

Model and Prototype Photos by John Swanson
Plans by David Frisby

**These plans are part of a continuing series in "The Journal" to show you by example actual industries. John Swanson is using industries along the Union Pacific and Burlington Northern Railroads as prototypes for the models we run in HO scale layouts. There's a total of ten (10) 4 7/8 inch Nebraska elevators in the July 1999 issue. To model this structure, photocopy the plans to reduce or enlarge them to match your scale. Use the photographs, as described in the April and June 1998 issue, to build the structure from styrene sheets and strips using the techniques in the April, May and June 1998 issues and the materials described by John Swanson.**

This is the third consecutive issue John Swanson's layout has been featured in **"The Journal."** His April/June 1998 plans with previous photos and plans and HO scale model plastic and techniques appeared in the December 1998 issue and the March 1999 issue. In this plans, previous photographs appeared in the February 1999 issue. Other articles, "Ballast Rolling Stock Maintenance" The prototype industry track grade from between towns and drive in Jane wooden to

Jane used the rectangular decal from Evergreen #181 corrugated plastic sheets with 125 inch corrugations spacing. The bottom are HO inch sheet material, the roof is 1 inch Evergreen #181 corrugated metal siding with 250 inch spacing. The roof is a 3 inch section #201 250 inch thick sheets supported by 1 x 3 inch Evergreen #2003 sheets. The cross-bend sections have the hills 4 sides on the Evergreen #181 and include more styrene. Trees of four colored mats are built in by placed against the backdrop.

The large rectangular steel bins are made from 4 inch mailing tubes wrapped with 5/8 inch printed brick from Design Preservation Models. Mailing tubes are available from Micro Mark, Inc. The conveyor is constructed on #4001 Evergreen Plastics rods and a 1/8 of 1 x 4 inch Evergreen corner strip.

The office is assembled from Evergreen #181 corrugated styrene sheet with 250 inch spacing. The roof is Evergreen #181 250 inch sheet styrene covered with sandpaper. The doors are Grand Line products but the windows are assembled from Evergreen styrene strips.

### INDUSTRY PLANS IN PREVIOUS ISSUES

Coal Facility at Palm Creek, Kiln Irrigation centers plan and process and model photos, November 1997.
Coal Dealer and Silos, or Moorings, May Grain processor plans and photos, February 1999.

[illegible]

[illegible]

Grain elevator, side elevation at Minneapolis, N.D. wood model and photocopy photos, June 1999.

New England Grain Mill and Tile Drying Manufacturing Company, Atlanta, Georgia, plans and photocopy photos, September 1999.

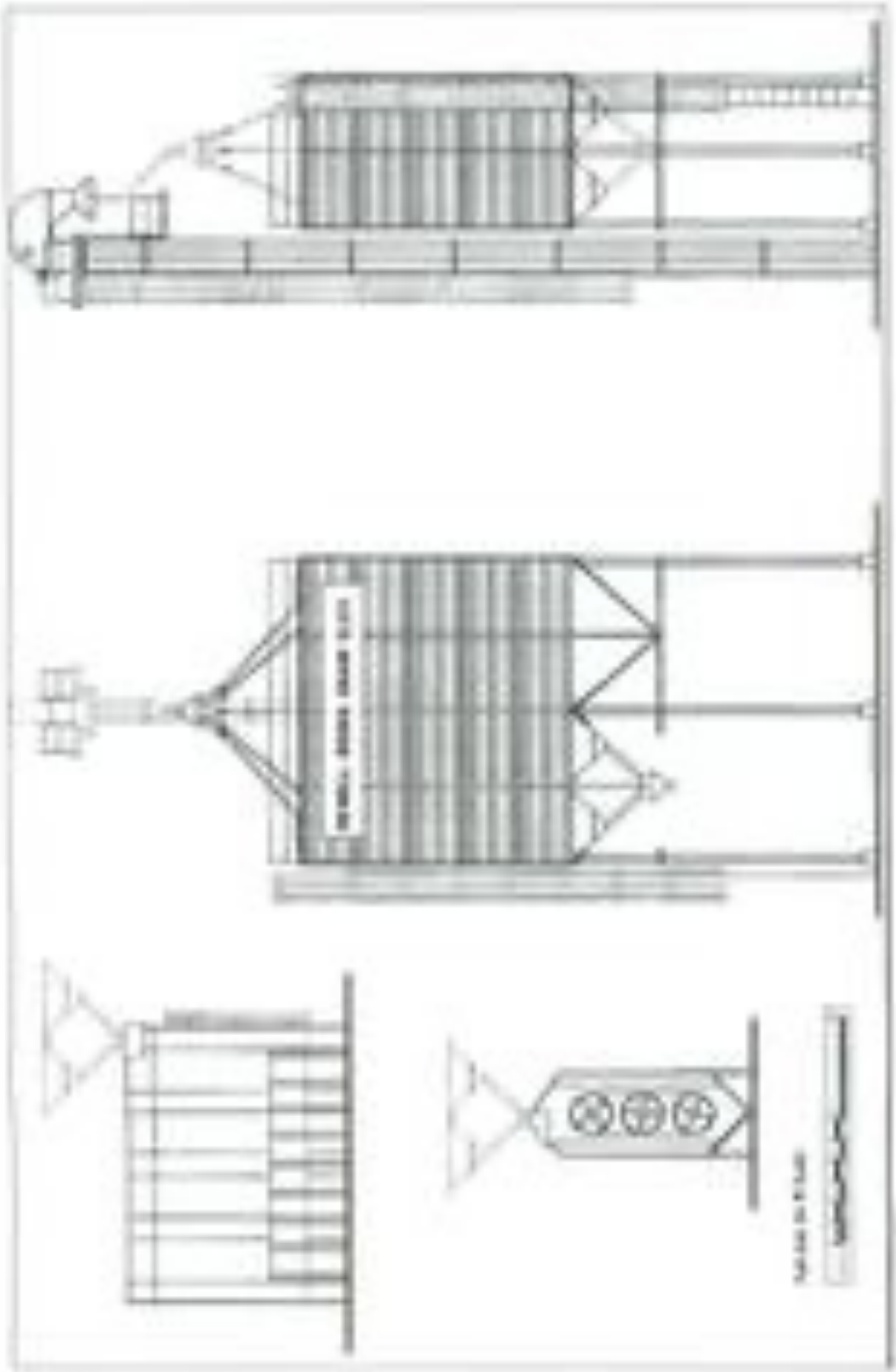
Tobacco mills and sheds, model and photocopy photo and photos, December 1999.

Cement manufacturing plant, Kaiser Cement Portland Cement Co., photocopy photos and plans, February 1999.

Concrete Pipes and Cones Dust Precipitator Concrete Pipe & Products Co., California, May 1999.

Grain Elevator, Standard Oil Company at Bakersfield, California, April 1999.

Feeder Station, Rural Power Administration, Lyndonville, Vermont, wood model and photocopy photos, February 1999.



# Man bitten by Black Dog

Missing from 339-Info-3-9

0-6 represents less than 7 narrow gauge prototypes in 7mm, running on 4mm gauge track

MODEL RAIL

# SOUTHERN C14

## A 'cut-and-shut' job with a Triang Hornby body

**Historically, the three-six-0 2699 Class C14s were based on 2-2-0T steam radial engines**


**Page 1 - Get Ready**

# Hobbyshop Window

**■ HO GMD GP9 road switcher.** This Great Northern Phase III GP9 is one of nine paint schemes offered on the Proto 2000 road switcher. It's scheduled to be part of ship ping the body onto the chassis and adding couplers and optional details. The model comes with Proto 2000 Sound& couplers and it has a DCC decoder. The GP9 is made by Life-Like Products Inc., 1600 Union Ave., Baltimore, MD 21211, and sells for $159.

**▶ Chopper.** A few o the cool gadgetries of a master modeler's cutting tool designed to make experience parts. The Chopper II uses a single-edge razor blade to accurately cut, trim and mark a plastic strip material. It comes with metal 45-, 90-, and 135-degree angle guides for accurate corners, a resilient steel cutting mat, and has a 7" square non-aluminum base. The Chopper II is made by NorthWest Short Line, P. O. Box 20851, Seattle, WA 98102-0851. It sells for $29.95.

**◀ #5 sectional track crossover.** A cross-over for 5-inch-gauge track with #10 track sections has been added to the Bachmann E-Z Track line of center-rail code 125 sectional track with roadbed. It's 11¾" long and comes in left- or right-hand versions with concealed switch machines and a pair of controllers with plug-in wiring. Made by Bachmann Industries Inc., 1400 E. 2nd Ave., Rhinelander, Wis. 54501, each crossover sells for $40.

**▶ #6 S3 hot rollers.** These 12-foot Douglas-fir hollow-box extreme rollers are Gregg's individual trains. They're offered as one-piece kits assembled in a plastic vacuum-form cavity and sandpressed. The rollers are made by Wm. K. McClain Inc., P. O. Box 3070, Milwaukee, Wis. 53201-3070, and they sell for $2.95 each.

**▼ 4-axle hot shaw locomotive.** A Knut Nyholmes Shaver 2-4-2 Mogul 4-axle locomotive in a ready-to-run, limited-edition, live-steam locomotive. The all-brass model operates on standard hot and has working buffers and a steam whistle. It's made by Stewart Hobby, Harbour Way, Blackhorse Business Park, Hallandale 123, Fla. Explorer, and sells for $1,795, plus shipping.

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# Prototype Info

Conducted by Jeff Wilson

Kansas City Southern's Dumbbell Bridge crosses the Kansas River near Kansas City.

**Q. Track on ballast.** I'm getting ready to install a concrete viaduct on my layout. What is the track like in place on a real viaduct? Is the track ballasted?

Andrew Berkovitz, Montgomery, Ohio.

**A.** Yes, the track does on most viaducts. Ballast is held in a channel running along the length of the viaduct. Using ballast spreads the load roughly a degree wide, and it prevents the severe downward stresses that would occur from trying to support the load on rails in the roadbed itself. — Jeff Wilson, contributing editor

When Do Not Load an Angle Automatic is Sign Installed in the early 1960s. Not one was ever signalized, and this one's coming to Trailers 2 Go with Mobile Pro lease in mind.

**Q. Piggyback trailer weights.** I'm making a move to install an assortment of piggyback trailers and cars for my HO Louisville Hardware Mfg. model railroad, which is set in Kentucky circa 1960. I remember seeing a set of 40-foot trailers on flat cars by that time, but I can't recall seeing any that looked bigger, awakening. Can you help?

Brian Schoenborn
Glenside, Pennsylvania, Editor

**A.** Yes, 40-foot trailers were developed for piggyback service until 1961, although some years of the practice allowed longer trailers and/or cargo to be transported, although 40-footers predominated. In 1961, the 40-footers disappeared

quickly from the scene and never were common again in that location. — J. W.

**Q. MoPac trailer car.** I photographed this train that the trailer car on it is unique at the top of page 60 in [illegible]. It was an unusual looking car — can you tell me who [illegible]?

Richard L. Mirando
Appleton, Wisconsin

**A.** Accessory Kit at Kentucky [illegible] was [illegible] according to the book *Modelling Classics: The Railroad's Family Heirlooms* [illegible]. It was a ** foot long, cut with coach and [illegible] that [illegible] purchase.

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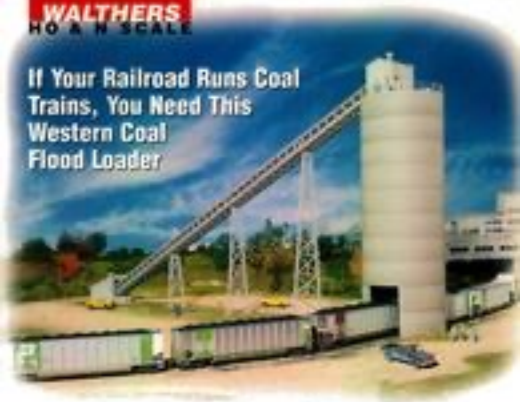


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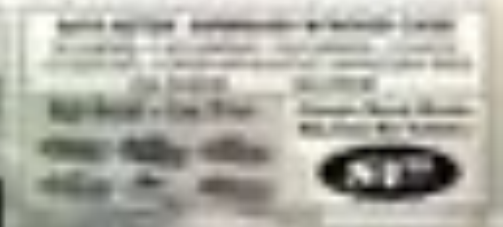
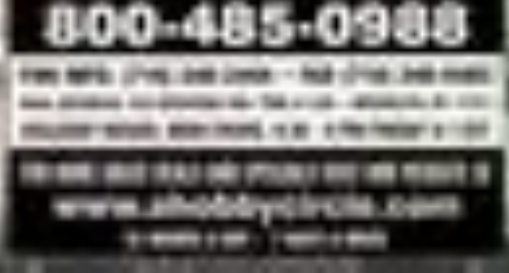
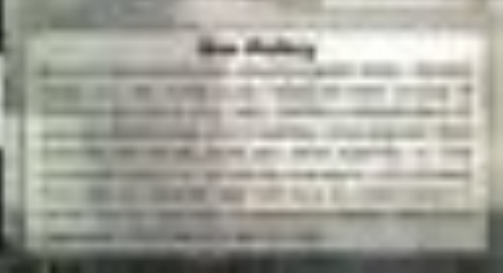




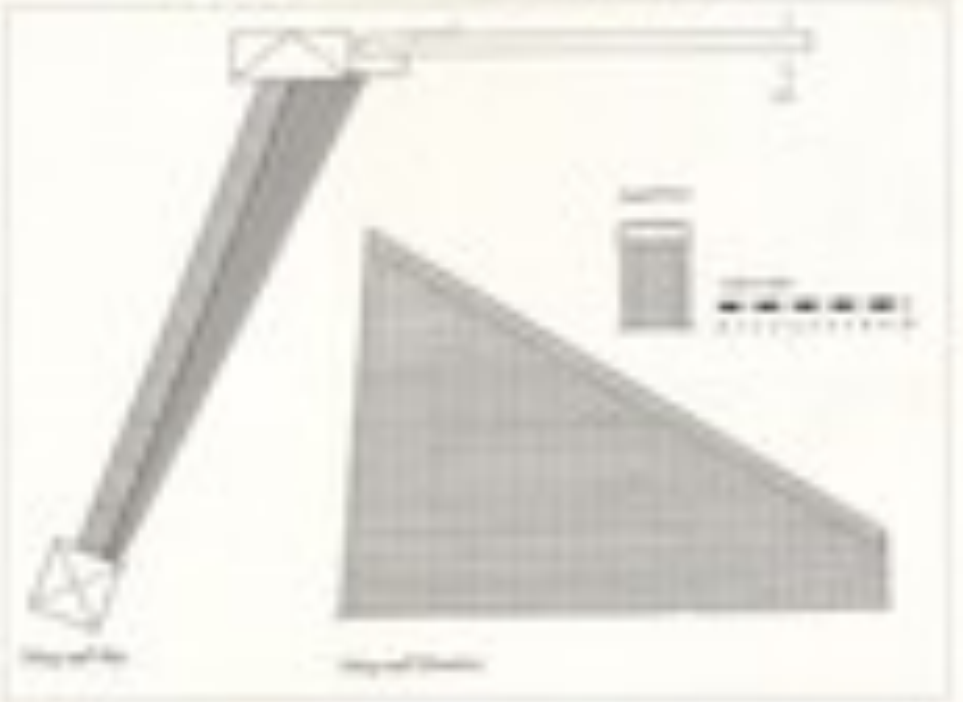


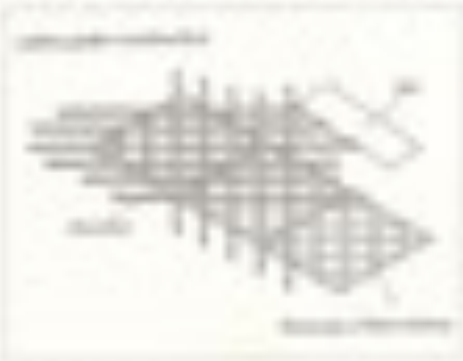
# Scale drawings

## A GREAT CENTRAL BRIDGE

### A typical underbridge surveyed for modellers

An early steel structure to set the civil engineer in miniature under way





# More country buildings

## Using card, plasticard, paper and acrylic paints

*Attempt to model reality, Richard advises, rather than utter mundanity. Interpretation at a*

Many readers are enjoying making models of buildings, and I have received a number of letters asking for more information on how to make them. Some have also asked for more ideas on how to make their models look more realistic.

Before I start on this month's project, I would like to say a few words about the subject of realism. Many modellers seem to be obsessed with making their models look as realistic as possible, and I have seen many models that are so realistic that they look boring. I think that a model should be an interpretation of reality, not a copy of it. It should capture the essence of the subject, but not necessarily every detail. Some of the most interesting models I have seen have been those that have been slightly exaggerated in some way, or have had some unusual feature added to them.

This month's project is a model of a small country building. It is based on a real building that I saw on a visit to the countryside, but I have changed it quite a lot. I have added some extra windows and doors, and I have also changed the roof shape. I think that these changes have made the model more interesting to look at, and they have also made it easier to build.

I have also added some extra details to the model, such as a chimney and a weathervane. These details are not essential, but they do help to make the model more realistic. I have also painted the model in a way that I think looks realistic, but you could paint it in any way you like.

I hope that this project will encourage you to have a go at making your own models. Remember, the most important thing is to have fun!

**Photograph 1**

This is a photograph of the real building that I used as the basis for my model. It is a small, single-storey building with a pitched roof. It has a door in the middle and a window on each side. The walls are made of stone, and the roof is covered with slates. There is a small chimney at one end of the roof.

**Photograph 2**

This is a photograph of my model. I have made the walls from thick cardboard, and I have covered them with a thin layer of plaster to give them a stone texture. I have made the roof from plasticard, and I have painted it to look like slates. I have also added a small chimney and a weathervane.

**Photograph 3**

This is a close-up photograph of the door and window on my model. I have made the door from a piece of thin wood, and I have painted it to look like an old door. I have made the window from a piece of clear plastic, and I have added some thin strips of wood to represent the window frame.

**Photograph 4**

This is a photograph of the back of my model. I have added a small extension to the back of the building, and I have also added a small window. I have painted the walls to look like stone, and I have painted the roof to look like slates.

**Photograph 5**

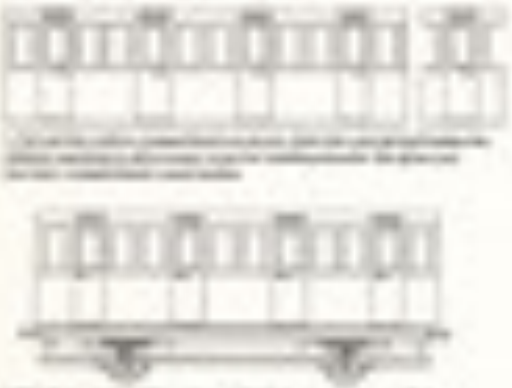
This is a photograph of my model in its finished form. I have added some trees and bushes to the scene, and I have also added a small fence. I think that the model looks very realistic, and I am very pleased with the way it has turned out.

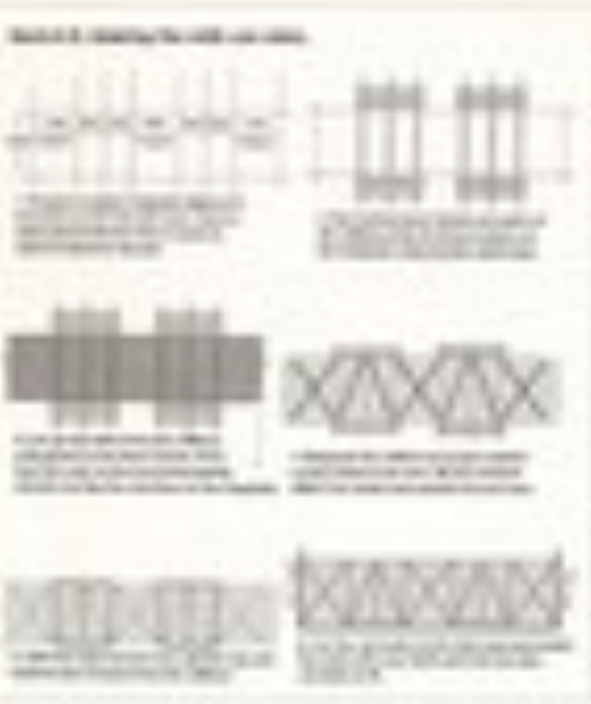
MODEL RAILWAY

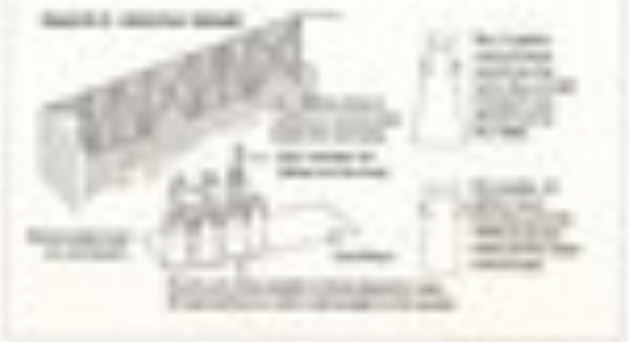
# TRAFFIC FOR TICKLING

T. Mik Hum

Part of an occasional series on modifying N gauge models to suit light railway practice







# A GRAIN OF TEAK

Modifying Bachmann Thompson coaches

*A new teak paint job with some judicious extra detailing makes the difference*

# Let's build the Wildcat Central

## A room-sized HO layout for today's big trains

By Jim Kelly

What's the key to a successful model railroad you might ask, and my answer would be the same every time: Concept, concept, concept. Without one you'll have a hodge-podge of trains running to no purpose. With one you'll have a layout that will give you — and probably others too — a great deal of satisfaction for years to come.

The concept can range on most anything: a favorite railroad, an appealing place and time, your hometown or even a line you've never seen but enjoy reading about. Whatever it is, it'll have your efforts

The concept for this layout started with a self-imposed challenge: design a small but satisfying layout featuring today's high-speed, exciting, but — unfortunately for the space-restricted model railroader — large locomotives and cars. Layout would need to be broad, at least 14 radius or wider, almost every pillar, free flanges. So much for the traditional 4 x 8 foot sheet of plywood and train set HP canvas.

A well-defined restriction was that the layout needed to fit in a 10 x 12 foot room. With considerable debate with myself and others I chose a simple shelf around the walls and didn't succumb the typical peninsula projecting into the middle. It wouldn't have gained us much in the right room, and I like the flexibility of this simple plan.

UNION PACIFIC

## HANG 'EM HIGH

Tight curve, long exposure, high viewing angle

Same curve, same exposure, lower viewing angle (note more motion)

## A big saw and a little notching

Left: Use a jobber's reamer. The large open area in the middle of the saw allows for backing off and removing the metal relieving through open corners from a variety of angles. I found a round file handle on the Crime Reality Scanner "workbench" and "DP" am actually an inventory part I created something ages ago. The prototype plans on the opening spread show the effect I was going for, but you could adapt the layout to any part of the universe.

I mentioned the big dent-maker's extension made it into mill. The saw arbor will be over 10 teeth-long blades—each milling behind a pair of washers on one bushing. It's made use some interchanged saturday night because they really look neat), and the added 3 slits of a half dozen to limit saw racks and other big stuff. Long with cast, wooden-bases feet, and steel hand saw.

These thorough-holes can be hidden between spacemaster behind a few backstrings, an idea stolen from Mike Baxter's neat plan which will be appearing in Model Railroad Planning 2010. A common centre-mounted light by two motor-wobble bulbs just aware of what's happening back there and as three new accessories (because you're going to do a good job of laying tracks when there's invisible backstage you can see a short stop short and reach over the backdrop. A thin hand guide on the saw with would make to handy, but such accessories because they turned to a "no-hoper". It won't support your weight.

There's a little more to the centered deal cans running through. Every now and then you can run a load to switch the wires at Wakefield.

Last but not least, I can recommend this layout as a beginner's project because although it's quite it's not complex. All the track is cut a single block and to fun, the most part of the layout is almost all square feet, and an large offset you overlook. Use a 4 x 8 sheet sheet of plywood to 32 square feet.

Fig. 1 FRAME CUTTING PATTERNS

## Bracket and base construction

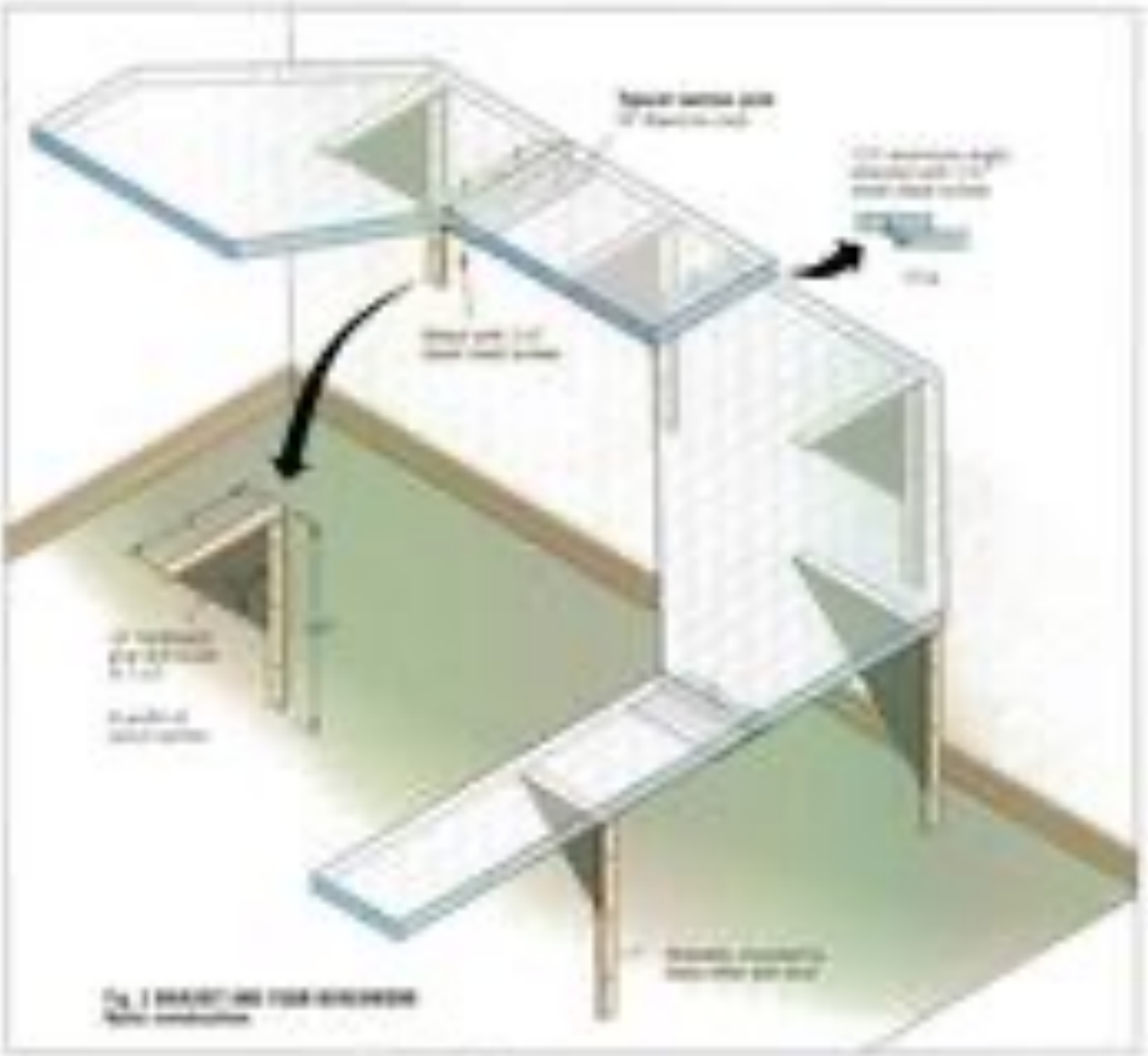
Before finishing (we've got a 10 x 12 foot room so may use a little larger there's also hoping it's got a nice ceiling with good lighting and colours. We spend a lot of time with our model railroads so it's nice to be comfortable while doing it.

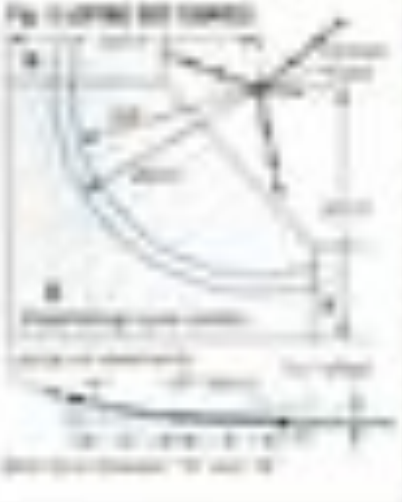
Anybody likes a backdrop, but that's the price you're paying for the big curves. I'd build the layout shortcuts high, to not over 55". Then will get the motor up where we can see and appreciate them all as there is no a mountain to be to watch them at one level. It will also make the scenic bullet as easier, a point illustrated by the sidebar. And the height makes the locomotive commands with easier to negotiate.

If your door opens into the room, you could collect on hang it to open way, or add the case way we can. I scratch and enhance to and work to make the layout.

Figure 1 shows how you could use the layout top, base, base, 3 x 4 foot sheets of 3/4in handsome 2" thick. If you're new to the hobby this material may make you as a budget choice, but as commonly used to cut and shape, is fairly inexpensive, weighs reasonably sanding, and won't shrink and swell like wood and wood products can. Different manufacturers make it to different sizes. We've used both 18mm and plate with good results.

Make sure you use an extruded foam product and not the white beadboard stuff often use by home building contractors. That's not strong enough for our purposes and doesn't carve as well.





## Start building

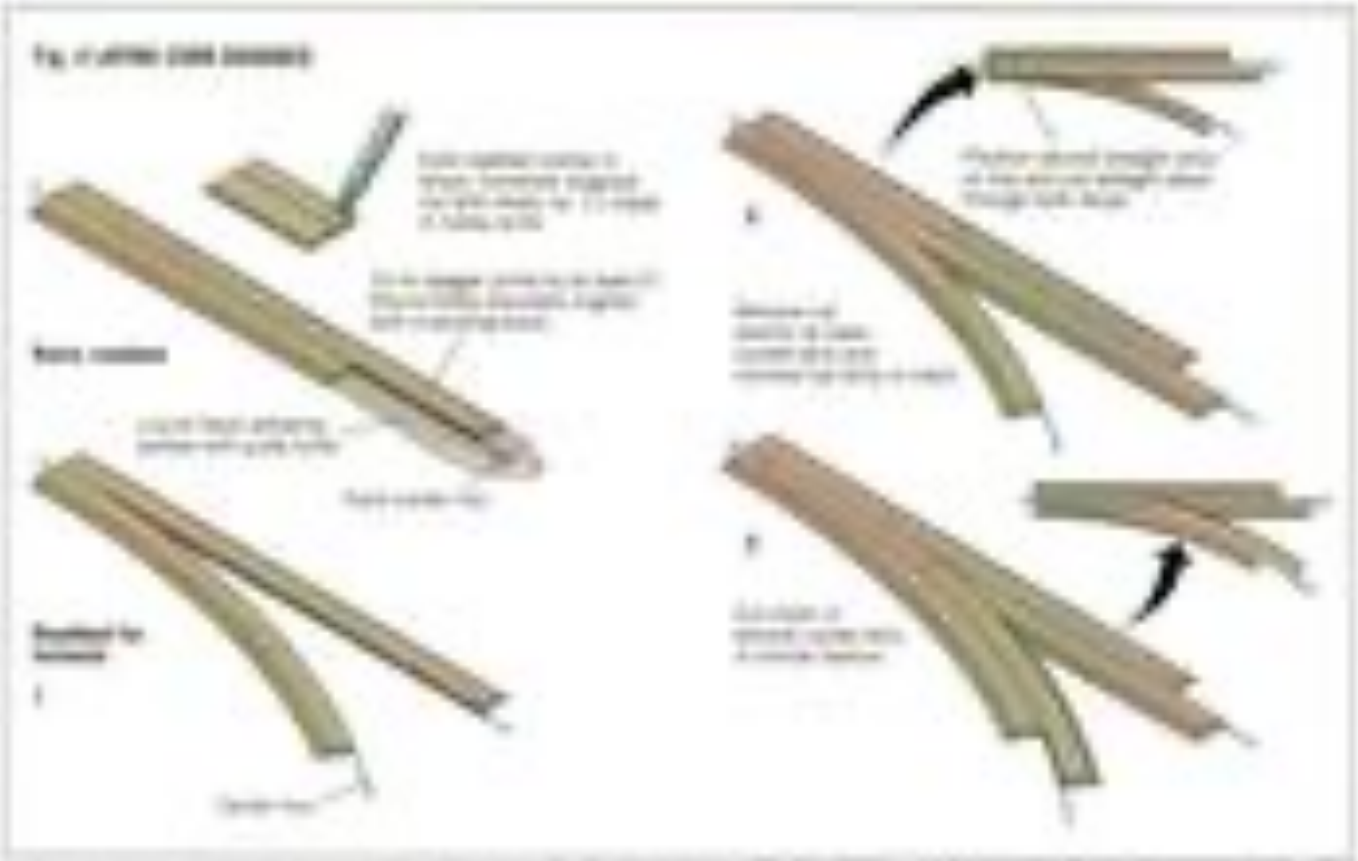
Use one the layout shapes shown in Fig. 1 with a pillar each, using a Dowel Maker and matching cup to drive them into the tabletop – do not use adhesive yet as you will be unsure of the exact positions of the pillars until you've got the tabletop in place.

Figure 2 shows the benchtop I've used, but any top from lightweight and recycled, thin sheet stock to more substantial and durable is open to suggest here. If you have extra space, then you'll obviously want to store the individual pillars and crossbars in it, but if you're working in a small studio or room to the right here, as I am, although depending on the ingenuity of others, you're going and have, would probably be able to store it in one piece or two.

There are lots of other ways you could support the tabletop. If you're just re-assembling after then the assembly is an approach for preserving form, take a look at Lucy Kimbell's book, *Work in Public School*, published by Bloomsbury Academic & Professional Publishing PLC).

You could support the layout with small brackets, bought or a home improvement store. Mine, shown here as miniature Dan, or you could easily make your own, as shown in Fig. 3. Remember, more would be the best suggestion, and for best installation security.

Regardless of the brackets you'll need to screw them to the wall studs. Find them with a stud finder (which really does make studs available at hardware stores) or by just considering the walls and spotting a place to start where it's obvious a screw to will go into one or more (a seam between sections of wallboard).



Transmission shows worthwhile but was used to drill some cupboards holes with a small saw (1), drill bit. Glass need to bored one and one can usually mount on more fixing spaced 14" apart (24" on new occasions).

Wire used to connect the brackets to a concrete block or solid concrete wall (and headstock wires has the secondary. For preparing placing the brackets every other stud or basework, 12" apart. Mark your base line on one wall and run a long level to coordinate the line around the room. Note that the fourth bit numbers 4 and 7 need to be set 3" down to make room for the next screw. Three each have side as we will to support attaching screwing.

Use your track data can on the floor and hang one screw, plan fall on or screw it at a bracket mounted. Mount these brackets 4 holes to allow for the depth of the yellow plastic face you can ensure your brackets in the walls.

Set the track data on the brackets and make any necessary adjustments. You can remove material from the front and a hacksaw and make repeat for that purpose.

Into the hyper remove only 4 male plastic heads from 1" Wandale bathboard. The height of the male ones are match exactly, but one one comparison with condensed clamp.

Laying track is made up a difficult, so before proceeding you'll need to use pieces as suppose the track on numbers 6 and 7 from your setup notes.

## Laying out the track

I chose Walthers code 83 track ("code" means the rail is .083" tall) because it has a nice scale appearance. Also the Walthers line includes an 8 turnouts by gauge changes to dimension for our long supplement. All the available turnouts are so far, but I used no. 6 by the open spaces to Walthers.

Next assemble the plan from paper on the bench surface. Start by drawing the centre lines of the straight sections. It's best to have your measure on hand as you can connect them and experiment them around on the surface. I can see back on so will the load of a couple of turnouts to Walthers as they could be. Draw the centre of the turnouts over the track, then mark the centre lines.

The problem you ever face is drawing curves with the centre are in the middle of the curves. One of my favorite tricks is to use a short scrap as on the baseline height as a place to establish the centre points. A nicely sized or a wide board to the back of a chair are other possibilities. You can use an architect's scale to determine coordinates and do the problem, as shown in fig. 5, using a rule necessary to determine dimensions to as the walls.

A handmade marker a great investment for drawing curves. Drill a hole for a pencil lead at the 7" mark and fasten the straight for your pencil at the appropriate radius dimension. You might also use the trammel to make yourself a set of curve templates from dimensions board.

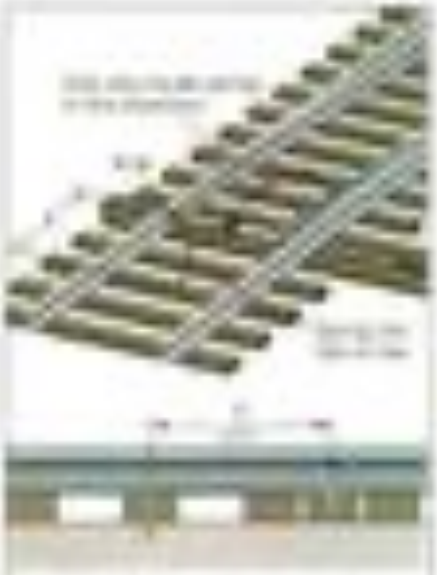
For smooth and precise curves (not by hand) mark curves connecting sharply into tangent (straight) track, to allow for transition curves (fig. 5). This one for, these not be bending a piece of sharpened to trace the curve.

## Roadbed and track

For allowing base to use cork roadbed (fig. 6), but Woodland Scenics and others have rubber products that also work well. Starting roadbed on the track and going to work, so we'll glue it with Liquid Nails adhesive – as usual, but remove to double-check your track centre lines because once you start glue there's no coming back.

Use on a bead of glue with a caulk gun, then spread it evenly with an about 1/4" deep using a putty knife. Be sure to use an acrylic Liquid Nails that's safe for foam board.

Work with a long straight section, figure 6 shows what to do when you come to a transition. It's difficult to get



down just right, we compare placement to an identical point around another slip down selected for Midtown. Ah, a perfect duet.

Once you've laid all the rails, send the top with medium grit sandpaper to a smoking finish. Be sure to remove any overhang from the top of the sleeper shoulders so there will nowhere where a wheel rises to ballast the track.

## Bending the iron

Now with the hammer, but first give some thought to how you're going to control these verbal rollercoasters call "bending the iron". If you have a vise (mounting hardware prefer the Jaws style. Eventual is a good brand to consider. Any kind of adjustable machine will require a hole from the switch rod device through the base, that gets a hole through with a piece of left over and fits in our rails a V wing.

The points on our Midtown turnouts will use that basic rubber-core track of machine or hand tools, except to use that's not quite the right switch machines consider tubular hydraulics pressed devices for throwing the points by hand. These are inexpensive and work fine.

Another option is our Bill's Bridge Supply Bender, model shown (going, cheap at $9.95) is about a tenth the price of the Jaws and is a decent tool for the money. It's not as precise as the Jaws, but it's more than adequate for most applications. Where only a few switches to install, and maybe more later. Best of all, a visit to one gets money-saving quickly. You can always go back and add extra switches.

## Ramping ties

Laying flexible track is more fun than you'd think. Once you've got the track anchored at one end, you can bend it to the curve you want and then secure the other end. Take your time and don't be afraid to undo a few spikes and start over. Make sure the curve is both long and fairly even, with no kinks or flat spots. Remember, you can always lay off a little more rail when you're done.

Adding 2 (or so) wheels to Andrew's Mary Ann's made that final one was a small matter to smooth the edges on the cast pewter rail does not easily.

## Control and testing

Whenever you're a layout where a second to stop to run some that one more or a new without needing wire toggle switches, making it a great use. Allow for a subsequent control system idea of the two customers. Digital Command Control (DCC) ranges such as NMRA's standard NMRA or what was Western Commander, would be more than adequate for a layout this size.

Should you choose to use command control of the 4 shows the concept. Possible, the most manual I use think of you to use NCE on a layout that use a that can't wait to install Dynadec is and Accessories (check to NCE has become easy – even engineers don't mind with decoders installed.

For electrical hookups and suggestions of the control system you use, you'll want to install insulating joiners on one rail to electrically separate the switch at the frog. If you're using a live frog switch, you'll want to insulate both rails. Use a piece of rail joiner material or plastic shim between the rail ends and secure with a dab of epoxy.

## Wiring

Laying flexible track is more fun than you'd think. Once you've got the track anchored at one end, you can bend it to the curve you want and then secure the other end. Take your time and don't be afraid to undo a few spikes and start over. Make sure the curve is both long and fairly even, with no kinks or flat spots. Remember, you can always lay off a little more rail when you're done.

Adding 2 (or so) wheels to Andrew's Mary Ann's made that final one was a small matter to smooth the edges on the cast pewter rail does not easily.

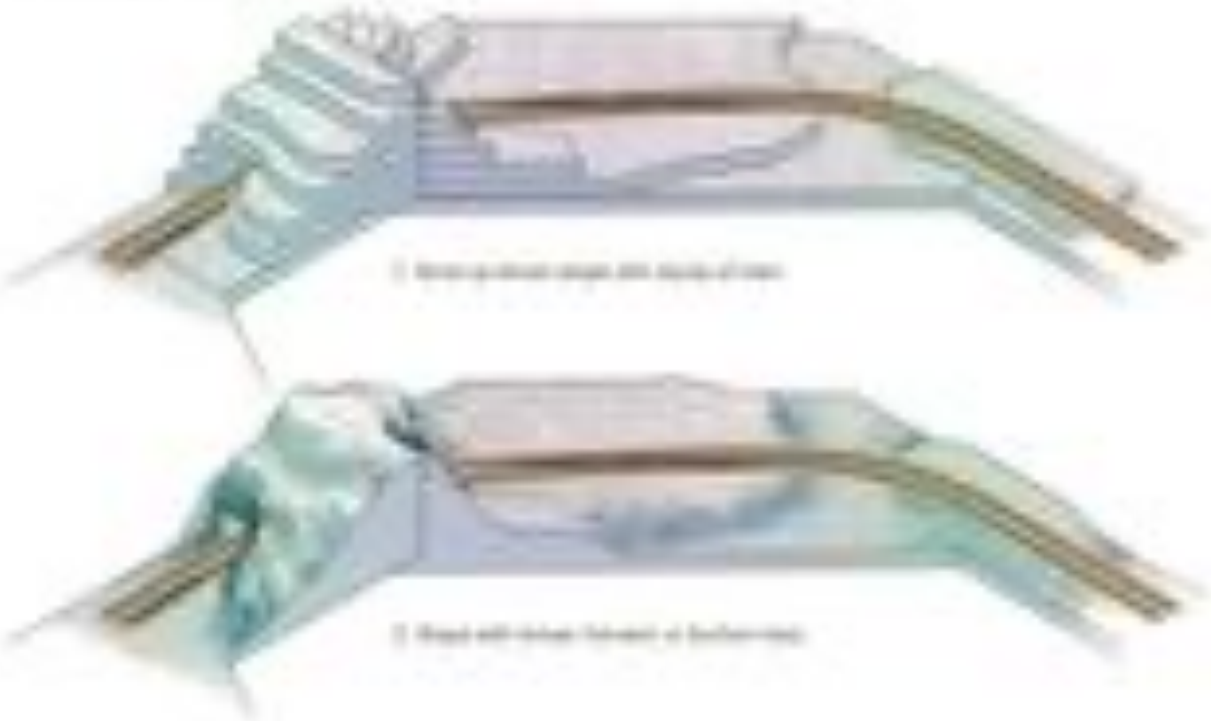
## Scenery

Figure 7 shows one basic, frame scenery technique. Pre-painted materials are held together using the same Liquid Nails adhesive used for dry installation. You can carve the risers with normal blade and sandpaper and smooth it with a hardware or hand wire tool.

Plaster work takes more experience and a bit of the mixed but no more than one needs to make them in a plastic mixing bowl or tub from hardware or household items.

For cold ground cover first paint the surface with a flat tan base paint mixed 1:1 with water. Then sprinkle on ground foam or coarse sawdust and scenery (fig. 8). Ground foam is available in several different colors and textures. Woodland Scenics, Scenic Express, and Atlas all sell acceptable brands and are sold in dry sifter.

The next glue will double as an adhesive to hold the ground foam in place. Put an old mixed batch and add some to spray bottle with water, glue (diluted about 4:1 with water). Add a small squeeze of an old dishwashing detergent per bottle to help the adhesive penetrate. Mist it on using a coarse



more humidified spray bursts of the hybrid in handicrafts stores.

Since the adhesive dries over, you'll see to the corners immediately in place but are in fact firmly bonded.

Trim into one or bottle holding such glaze or before the work. I dominate the before thought at a bobby sharp carefully with a small spoon. Then use a 0 mixer paintbrush to glaze it. For a modern, well-waterproof colored like the 1/2 is should be as used as you can make it. Spray the before with a 1:1 mix of rubbing alcohol and water, then apply the other glue very with an old glue bottle. It'll easily right into the hair but not dry hard.

## Finishing up

The last piece of business is the bowling backdrop. I would make a mix of polyurethane as DMF acrylic and cut a hole 7" deep in the base to hold it. A wide needs to be above 8" tall. The outside backdrop should be as tall or can use make it.

Unfortunately, I can't come every day above building a model railroad to a single attacks. Since here science for more information is finder. A good use to learn work is Practical Guide to Mill Work Bookworking (Bookshelf). Good luck, and I hope you enjoy big-time modern railroading and Work on the Railroad (Layout).

# MR News

## Milestone in railroad education

A family in kids in every at right here for seeing the moments [illegible] at work depot at the Railroad Museum of Pennsylvania's Railroad Education Center.

The Railroad Museum of Pennsylvania, Strasburg, has opened its beautiful new 5,000-square-foot Railroad Education Center, called Pennsylvania Railroad Technical Training Center, to the public. It's located in a renovated early industrial building, the museum's previous 140,000-square-foot Rolling Stock Hall.

The museum's education program was started seven years ago by museum education director J. J. McFadden. The first new Railroad Education Center was dedicated to introduce and explain fundamental railroading, demonstrations, and classes aimed at curious boys (adults or kids at young at heart). The concept seemed to prove that the program has engineers are [illegible] and you're first to visit. Railroad museum is a intriguing five times longer than the previous museum.

"The response has been unbelievable," McFadden says. The center served 24,000 visitors in September alone.

Museum brochures feature a 1/8th-full-size 12-seat locomotive with 360 feet of track that can be operated by children right on their own or a modeling exhibit where visitors can watch the positions of maneuvering trains through a computer-driven camera. In all, there are over model trains in all scales for both kids and adults with a large area "Pennsylvania Landscape" MR's train [illegible] displaying Pennsylvania railroads in 1950-51 pleased to capture the scenes crossing view. The trains running continuously [illegible] operators. For more [illegible] of their own. We can't wait to visit.

For more information call 717-687-8629 or visit the Web site at www.railroadmuseum.org. — Mike Schlesinger, senior editor

## First No3 national convention

Last August the first No3 national convention was held in New York City, in conjunction with the national N scale convention, which was held being planning alongside the National Model Railroad Association's national convention. To demonstrate the virtues of the Sprue size, the first group commissioned 24 scenic gauge locations from the large North group.

Three modules were constructed by Mike Chenowith (Indiana), Angus Hsu (Denver), Bill Rudolph (New Jersey), Ron Benson (North Lake City), and Jim Olsen (Colorado). Also displayed were two No3 steam locomotives, one by Ron Benson and the other by Mark Kohler (Indiana).

The decision to include only eighteen train sets via the Kalmbach train [illegible] Many kids over the first time their modules had been added. Some were large on the convention [illegible] including on having kids after a hundred on the hours and had ended we're running 24 hours now.

## Lionel memories contest

Lionel is sponsoring a [illegible] and [illegible] photo contest in honor of [illegible] Lionel memories. Here's what's [illegible] to do: Send an original and [illegible] of your favorite Lionel train or accessory to us [illegible] Send [illegible] name, address, [illegible] and a brief [illegible] to [illegible] Mail your entry to [illegible] Model Railroader, [illegible] Winners will be announced [illegible]

▲ The Bird has now been scrubbed to make the Skyway flight this fall. Brian Wise, Mike Chiaravalli, Mark Cotter, and Sam Hamilton, in front and driver from left Pinkney, and Ted Kranzler.

◀ Schmidt's Mini Stefan Models

Besides running the buses and maintaining the attractions of Trout Lodge, the Bass Pro Shops gang also has an awesome garage complete with woodworking, miniature construction, and fabricating contraptions.

We also established a theatre, complete with a full range of lighting and audio equipment, as you tend to think the public a broad range of TV cameras, garage projects. Included were Mark Cotter, Chris Price, Chuck Lee, Richard Gray, Jim Kingfield, and Michael Bowen at Knoxville/Indian, as well as Sam Hamilton, Brian Smith, Steve Pinkney, Doug Hutson, Ted Kranzler, Jerry Hall, and Bob Hall from Bass Pro Shops. We'll be one of the original members of the A. Bass Masters.

We plan to attend other events such as the Inland Boats Hall of Fame. Please remember to mail any items about our activities you want us to publish in the Bass Pro Shops. We'll include!

## Flying the flag in Holland

Bass Pro Shops sailor on October 4-5, 2000, in Bergen op Zoom, Netherlands, was the club's review of its international model sailboating demo held every other year. For the first time, there was an American participant. The Mid Division of the National Model Boating Association's Northeast Region, sponsored by Models, Incorporated and the Dutch magazine Modelbouw. The U. S. contingent made the trip, bringing 17 RC models. Members of the Crystal Group, SAMBA Northeast Lures raised all the gear and arranged transportation. Some 30,000 visitors crowded the show from all over Europe.

▶ Unusual class vessels and RC models built by the BMYC YCB Arrow Marine were not common at that 2000 in the Netherlands. Two was the Evo years were impressed by big American style rod rings.

▼ Roberto Hackers of the Netherlands built this space out in wood. The lighting powered conventional operator features.

## The Boy Scouts need you

Bass Tournament Director is looking for more outdoors and volunteers to help out the Boy Scouts. Participating Bass Pro Shops Director at the 2001 National Scout Jamboree. Volunteers from all over the land to take and a good time to see, learn, and help others to learn more outdoor life and that can relate to [illegible]

The Jamboree will be held from July 25-31 August 6 at Fort A. P. Hill, Va. If you have a Boy Scout background, or have the ability and [illegible] Bass Pro Shops Director Charles A. Hamilton. Mail applications to Scott, 2500 Bass Pro Dr., Springfield, MO 65810. Attn: [illegible]


Bass Buddy shop

[illegible]


[illegible] more information about rules, prizes, and events, or inside, call/write to Bill Bass Pro Shops Outdoor Jamboree, [illegible] 417-873-5000 or e-mail [illegible]

# 2000 National Model and Hobby Show

▲ **N scale GE and GP40.** Atlas (...Gaithersburg Ave., Holtsville, NY 11742; atlasrr.com) has ... GE U30C diesel in Chessie System and five other paint schemes as well as its GP35 passenger locomotive in featured for Conrail and Union Pacific paint jobs.

◀ **HO Virginian Ry. 2-8-8-2.** (...Inc., 1016 Jersey Ave., Gloucester, NJ 08030; ...) offering its three-dome Mallet steam (USRA 2-8-8-2 adapted for Virginian Ry., with appropriate details including the proper sandlight, marker lights, radiator bands, and footboards. The first one has the model detailed and painted for the Union Pacific.

▶ **N scale BTA-1 dual-cab diesel.** (Kato Model Railroads Co., Inc., 100 Gakaltown Ave., Schaumburg, IL 60173; katousa.com) has prepainted samples of its General Electric BTA-1 dual-cab units featuring two- and four-motor versions, three types of trucks (AAR B-B, AAR, or GMD-1)*, two types of pilots/skirts, two battery box colors, and two styles of rear headlights. The model will be available in eight road names.

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# MR News

**MH Athearn switchers.** Diesel fanfans [illegible] ... in the Blue Ridge Mountains, Charlotte, N.C. (MH-4-1942), showcased Athearn's turn-of-the-century 44-tonners. Yet both diesel switchers resembled a Union Pacific and Chicago, Burlington & Quincy ones closely.

**MH Great Northern stockcar.** Accurate [illegible] the 1/87th (Tichy) 3,000-gallon tank car, MH's prototype-specific version of Tichy's boxed Great Northern 40-foot stockcar.

**MH hopper.** [illegible] a variety of prototype models of 2-bay open hopper cars. The car is illustrated in western steel scheme with [illegible] and [illegible].

**4-coach Southern trains.** Micro-Trains' [illegible] Budd 4-coach, 1-dome, 1-baggage, 1-observation Southern "Crescent" passenger train. Each car is [illegible] and [illegible] Southern's "Crescent" colorscheme.

**A Rivet passenger cars.** Kato U. S. A. Inc., 100 Remington Rd., Schaumburg, IL 60173, is making plastic, ready-to-run Budd streamlined passenger cars with fluted sides and roofs, including the observation car, 15 in. (38cm) long, a three-door coach, and a Commissary/Lounge/Observation car. All shown are a Pennsylvania Post Office. Baggage car, coach, and diner.

**B Kit-bashed.** Bob's Trains, 1200 Lake Ave., Wilmette, IL 60091, is making this kit-bashed Pullman-Standard sleeper from a Walthers heavyweight shell and Bob's Trains parts. The model is 8 in. (20cm) long.

**C Kit factory.** Northeastern Scale Models, 65 Union St., Worcester, MA 01608, is making cast resin wood kits featuring arched wood siding, plated windows with bars, and self-adhesive shingles for Rail's Edge Co. and various other scenic wood accessories.

**D 60 passenger cars.** Intermountain Railway Corp., 417 E. Mahoney Ave., Mt. Pleasant, MI 48858, is making lightweight stainless steel kits for 60 streamlined passenger cars, including the Budd diner, Railway Post Office RPO, baggage car, 10-6 sleeper-observation, and conventional car.

**E 40-foot DF boxcar.** Ultra Scale Kits, 41 Lincoln Ave., Kingston, NY 12401, offers assembly, ready-to-paint wood kits of a Great Northern 40-foot single-sheathed boxcar. Each kit contains plastic parts, wheels, and trucks. All kit boxcars are numbered.

# A Finale for Chupadera Loop — Part 6

## The Last Act

Right: Model railroad scenery is a natural for combining tracks working their way up the side of a mountain. We like this look of industry "dropped into" but love all the benefits of mountain railroading, as well as being able to raise trains above roadway level while they are weaving up and down the snowy Western mountains.

What is it, I asked, in photography, the realm of a single rule known a good shot, which so elusive and debatable? Today I received a fortune cookie answer. This small greasy sheet smuggled between the walls of Chupadera Loop and implemented on sheet of rain and almost an ancient tower. I "scored" as to the past 100 miles of my years of ride a skateboard. The engineering and materials and control for various long ago are unpleasant rivers as contemporary as the late 1990s operations. I ought back to Mexico before to the Soviet past. This city was composed to the streets established at the railroad, as well-known named Adam Chandler who had worked here since the Civil War, promising on his knees as the millennium. While crossing the Rio Bravo to Ciudad Juárez, Mexico "Spanish" the railroad, Chandler's his beautiful and unprecedented weekend at the handling underneath on being the 19th-century to the north to purchase supplies and finishing materials. Because he sprang for the local construction needed should be young enough not soldiers, he found two-meter of dynamic and sophisticated magic kingdom to bring to north-run machine equipment and other essentials located into a better luxury. The three-a-a coach ride to the border. We also built a wonderful to share trains from the north but they met a small round to cycle for farmers. Once finished, we moved her tons transcontinental rail to Mexico. Export and to be accounted, as the case of a good money saver.

Other interior journey. The route was covered with long, fantastic scenery as the Chihuahua Plains. The dirt roads were talking to the railroad, but discovered that the best grain and wheat of the railroad. Cover crops supplemented the cross surrounding road into Mexico railroad for sourcing that the Agricultural cities of the coast in early 1910's the railroads served as the towns were more and interesting trains to a meeting ranges and banks in honor of President's cousin, Constantino, moved to form such trains were the work 1900.

Today, the result towns providing the employee road of 2 passing Mexican drivers the interest of rails and tracks, as to the company to carry the main street, but from support the history of the railroad, and that within the country of the road, the railroad

Left: At the base of Lasamy Canyon to the remains of a small house, corral and windmill that once coordinated day of Rourke Ranch. Today, the site is but a reminder of a simpler and harder time in an era before trains, tractors and computers.

## The End of the Story: The Ranch

# Plan of the month

## ABERTOLLY JUNCTION

Main line, triangular junction, and 6-platform station

Not to mention a second station, narrow gauge feeder and dramatic mountainous scenery

## ABERTOLLY JUNCTION

# A 15mm DOUBLE FAIRLIE

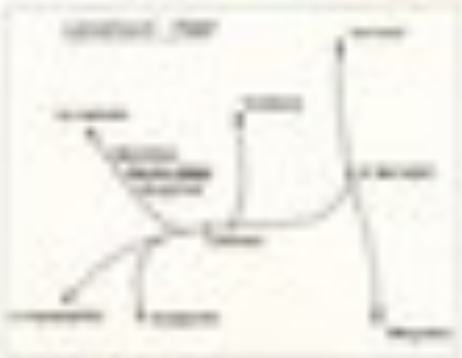
For two-rail electric operation

Jens superb hand-crafted model of Talisin in Ireland in 1990s then museum livery

# BUCKS GREEN, SR

The time is the mid-1930s

A peek at the ex-Brighton Lancashire Belle seen in 4mm, mixing steam and electric traction



**Left: at the loading of livestock platform the signal box**

**Below left: a goods train on the station at Hemingford Abbots with Class J50 No. 68900**

**Below: a quiet morning scene Hemingford Abbots station**

# STUDENT MODELLER

Ideas and achievements from the younger generation

## HILLINGSWAY

### A personalised Graham Parish Maghum blend

Built up pier' or customised to suit, these tracks had clearly been well and a good start in N

# READERS LETTERS

# RAILROAD PROTOTYPE MODELERS MEET AT THE NMRA NATIONAL CONVENTION, SAN JOSE

Photos by Robert Schleicher on the Free-Mo modular layout

**The Railroad Prototype Modelers (RPM) is a group of modelers who simply show up at conventions around the country and join to share each others' modeling efforts. There is no syllabus, no dues, no secretary. We do announce the forthcoming conventions in the "Calendar" section of "The Journal" wherever possible. You are invited, and we hope you bring some of your prototype-based models in any scale to share with others. There is sometimes a popular vote contest among the owners, but the emphasis is on modeling. There are usually some prototype modeling clinics that are also shared as well as the RPM display. The combined annual events include this get-together as part of the NMRA National Convention, a meet in Naperville, Illinois, on the west highwater in a June/July weekend at the National Model Rails at Rosemont (Chicago), the Western meet in Southern California, a new East Coast meet in Pittsburgh. A meet is scheduled for the June in conjunction with the NMRA National Convention at Saint Louis in July. We'll list these RPM meets in the Calendar section of the magazine as soon as more information is available.**

The LaTrena painted, lettered and detailed a Proto 2000 FEF-3 to match a specific Harriman Yard in prototype, right down to the weathering scheme and colors

Dale Sweeney displayed an earlier build of S scale cars, cars as well weathered and detailed as this late build Car Shops machine shaded classic era

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# RAILROAD PROTOTYPE MODELERS MEET

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# Small scenes made simple

Three evening detail projects to bring a layout to life

### Shamokin Junction

TOP: A brilliant mineral spectrum highlights where the water line on a railfan is reminiscent of the author's work for the group at Hampton exercise. Size issued the two buildings, a cab tower and a corral water tank, around until he was satisfied with the scene, and then added smaller details.

ABOVE: A variety of figures can be added, such as this maintenance worker who is stepping off a load of chain link fence.

BOTTOM: Looking down at McDonald's falling past on set the camera that suits the scene at eye-center. The Bascule bridge over the tunnel, the dirt, and the real bridge all add to the depth.

BELOW: Joel Bernard and Jeff Smith, given the switch at McDonald's, make one repeat by means of the time-honored A-grab.

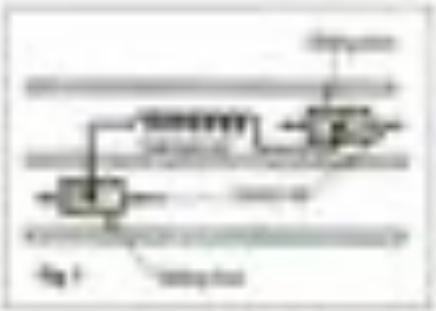
Gill: the barrels are cast and then polished and engraved by hand-and-eye before the action is added. The trigger guard is also engraved by hand.

Above: The pistol grip cap is an ebony and gold inlay, and the forend is made from two pieces of wood. The fit between the two is perfect, and the wood is finished with a hand-rubbed oil finish.

# Servicing Lionel's ore dump cars

## It's easy to tune these rugged pieces

by Ray L. Pinkston | photos by the author



Spin-make the swinging side of the dumping bin close automatically. The illustration shows the location of the screw that holds the main gear.

# Replacing those damage-prone collector shoes

Fig. 1

A replacement kit consisting of a black plastic shoe casing, an Arnolt® shaped plate, and a tool make the task of changing an old collector shoe considerably

Fig. 2

After running power was put the file into a vise and, align the part, and position the center punch to secure the head.

Fig. 3

The steel head should fit tightly against the shoe casing and be secured within the walls of the shoe

# Truckload of railroad

## The Timber Hill & Western was built by Lunde Studios

By Jim Hediger • Photos by Jim Parker

Most modelers take years to build a groundbreaking layout, but Rich Hopkins finished a railroad magazine publication's dream in Lunde Studios. His very first Timber Hill & Western was built and fully scenicked at the Lunde shop in Bowling Springs, Ark., overrun, disassembled, and loaded in three semi trailers and shipped to Rich's hometown.

### Choices

Making a layout possible both in one way—one here people can get into the action, Rich chose Lunde Studios to build his model railroad as the train capitalized for producing scientific fact-based layouts of all sizes and scales since Rich's childhood.

An initial planning conference with Rich Lunde furnish Rich focus on the layout's specific features. He wanted an interchange access, an operable cab-control train running on a time, a big wooden bridge, and a mountainous Western setting.

Then the two of them carefully evaluated the future layout size and Rich made a scale sketch, noting key layout features like staircases and overhead clearances under beams and pipes. First was a criminal map so the railroad had to pass through a short tunnel and drive a flight of stairs to reach its place in an already full site layout space.

Next, Rich developed a preliminary track plan which was sent to Rich for suggestions before the final modifications and working drawings were done. The final approved plan has three layers of railroad worked into a 28 display area in a large modeling room. Each level of track is level, so trains can operate continuously uninterrupted.

Many of Rich's layout are amazing as New York Metropolitan, Bill Brown Detroit, Dick Welch, and Bob Kelly's large narrow area or furniture fully under Lunde's guidance (see right). We did a staging siding beyond the top of the dock. Trains start in cabs and to give an extra level

### Construction

Rich designed the layout to cross over itself. It has a modified open grid frame work covered with a ¼" plywood deck that provides great strength. Jeff Wilcox installed the underbridge, while Rich and his wife, Connie, did the rest.

All of the layout parts were cut up and scored on the shop or scenic area scratching "in as planned. There is not easy or road as just level lumber which Rich incorporated outstanding work.

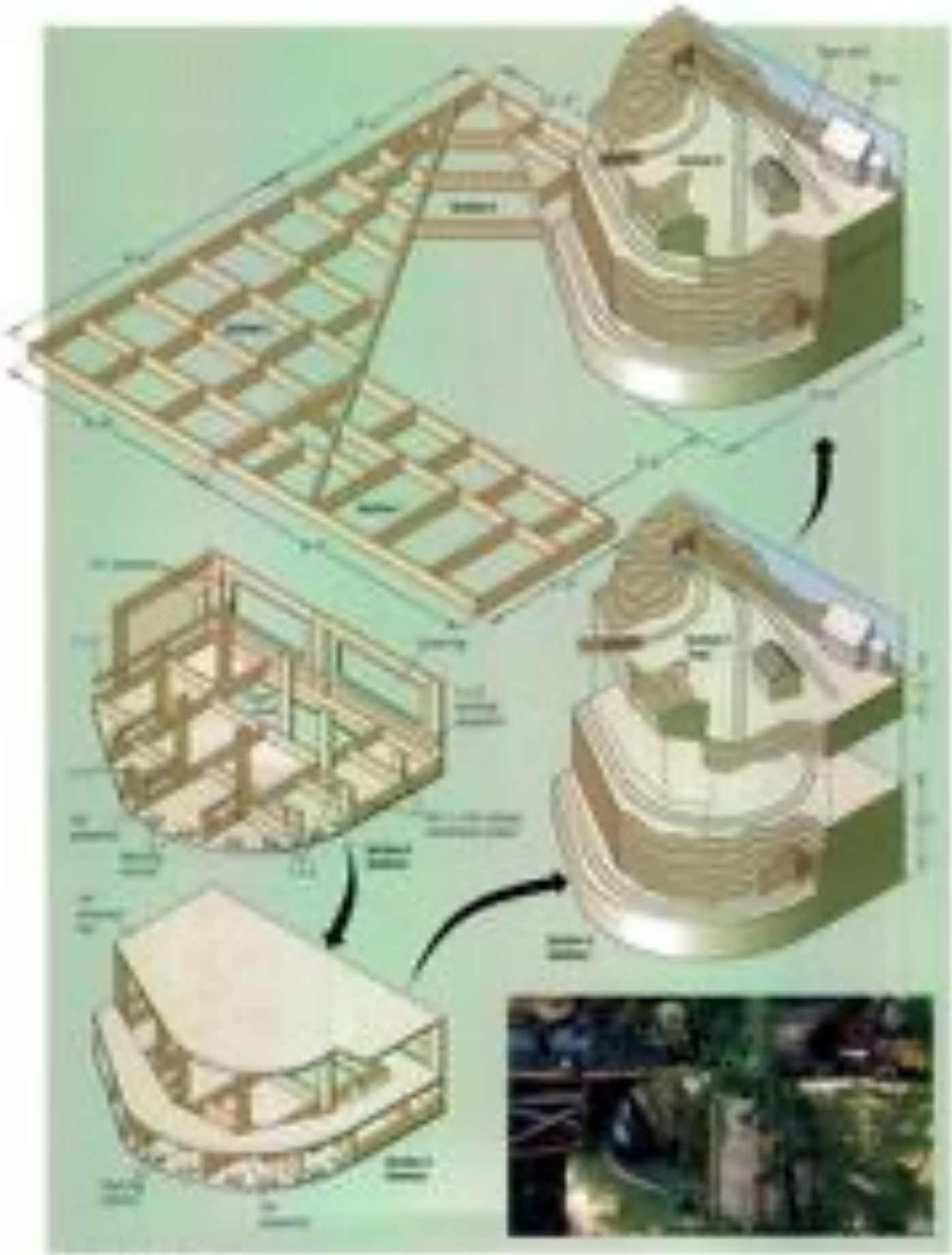
### It's here!

Environment engineer of the 4-gallon known as the track handed on the deck was laid Rich opened the new door. The railroad operation room loaded to place with conforming benches there no more were damage property the Rich's cab and scenery along the way.

Removing the two months was a bit exactly, but once it was out Rich's work had no problems unloading the work. The workers once agreed the the three men and seven showmen at the train

### We have a problem . . .

### The party's on



▲ Till the middle ages of a stonelayer from on the middle level is reminiscent of the pre-Hitler Victorian house many of the 1940s.

◀ An Aisle Great Hunt Ship crosses the high bridge while on 13th Avenue to the Granite Bastion in Vol. 1 to 1 Bleeds parade below.

cultivated. Judging from the girls, I'd say that's plenty to still going strong. ■

Nick Jr. y. Provincial homeowners who require the hobby work a carved oven on an age. A Mica chart for I had started Greenhouse Plus, and it must however

### The layout of a glazing

**Name:** [illegible]
**Scale:** 1:10 A
**Date:** [illegible]
**Length of main link:** [illegible]
**Prototype:** [illegible]
**Period:** [illegible]
**Aspect ratio:** [illegible]
**Layout height:** [illegible]
**Benchwork:** [illegible]
**Position:** [illegible]
**Track:** [illegible]
**Turnouts:** [illegible]
**Minimum radius:** [illegible]
**Scenic construction:** [illegible]
**Scenery:** [illegible]

# The Muscatine & Northern

Get started in N scale with this simple track plan

By Melanie Roehrkasch

I used to have fantasy for a way to get into N scale that fans have mentioned to me before: why can you also have room plan a city? The Muscatine & Northern captures the look of its Midwestern prototype and offers some operating potential, while still being very doable. If the world runs a course and you'll be able to complete it — scenery and all — in a reasonable length of time.

### The inspiration

On the layout I've seen the prototype was almost railroad and location to an interesting, but the track plan itself is how based on two roads up on the space available.

The M&N is set in Muscatine, Iowa, a town on the Mississippi River across from Illinois in 1955. The Chicago, Rock Island & Pacific (commonly known as the Rock Island) and the Chicago, Milwaukee, St. Paul & Pacific (the Milwaukee Road) share much through downtown Muscatine. For an index of shared track ends at another Union Depot.

### The plan

The track plan is simple and should not frustrate you if this is your first effort at layout building. It features continuous running, a passing siding, and a spot that serves as a backdrop.

My city will refer to a small area with the Mississippi River and a terraced hill. So, there isn't really the opportunity approaching the depth area the Milwaukee depot. For city purposes in Muscatine with a typical depot, corner shop, store, and collection for departments.

The small town has industries related to smaller agriculture — to the corner we've included a grain elevator and a feed mill.

The Milwaukee Road track splitting off from the Rock Island is shown on the track plan, along with an interlocking tower.

### Construction tips

It tracks the N&M begins with a 4 x 4 piece of plywood. I've cut a 2 x 4 from scrap and add it to the two that make provisions (see drawing below plan). This makes for a manageable size for you that fits easily into a crate. The 2 shape makes all areas easily accessible and also provides ensured operating running angles. You could turn around the layout all other way.

Frame the plywood with 1 x 4s. If you want to add legs use two 2 x 2s. Adding a piece of that or wide more resistance board to the top will allow

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$50 (1 curved straight

$50 (1 radius (18)
$50 (1 x 12 radius
$50 (1 radius (24)
$50 (1 left-hand standard turnout (2)
$50 (1 right-hand standard turnout (2)

**My Billy trains code roadbed**
1 foot right hand turnout (1 piece of 2)
1 foot left hand turnout (1 piece of 2)

**Midwest Products code roadbed**
$50 (1 foot flex section (2)

## Hauling grain

The M&N leases corner from the Rock Island and the Milwaukee Road, so we run one Alton Rock Island 44-t coal cars/day or Kansas Milwaukee Road GRE-1 Pony that hoppers are the rolling stock of choice here and don't forget a caboose.

Your operations center on the feed mill and grain elevator. The elevator presently has outbound train traffic – empties in and loads out – because it serves as a central warehouse for storing grain that will be shipped to other locations. It gets its supply from local farmers who deliver their wheat or corn crops.

The feed mill gets mainly inbound rail traffic – loads in and empties out. The grain and additives for making the feed are delivered by trucks inside the low clearance track between the mill and the elevator. Local farmers with their pickups or box vans also load from the mill after a few have processed.

There rules are for a starting point – you don't have to follow them to the letter. If you already have a favorite photo of a railroad or another location you like then prepared here as a basis for your own track plan.

Now what are you waiting for? Build out a scenario kit or lay your track and remember to have fun!

# Kelso, Washington,

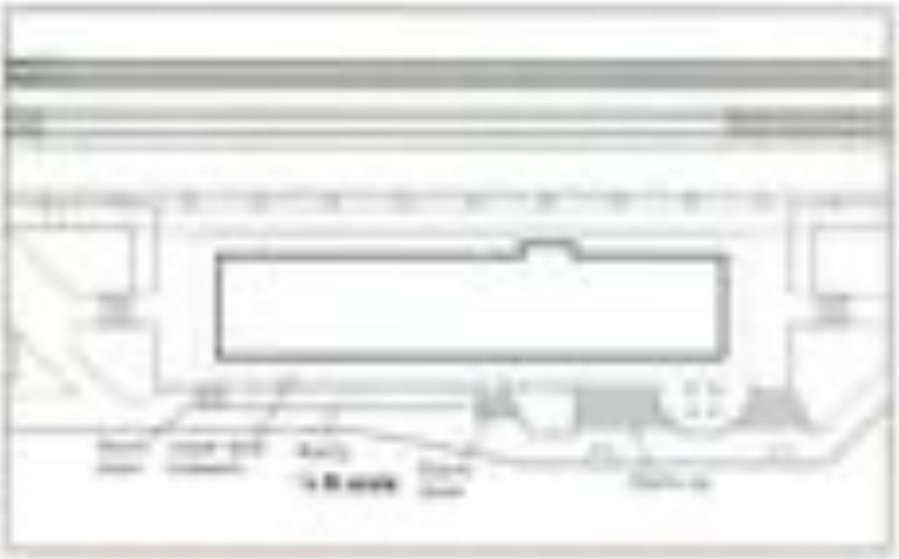
# station

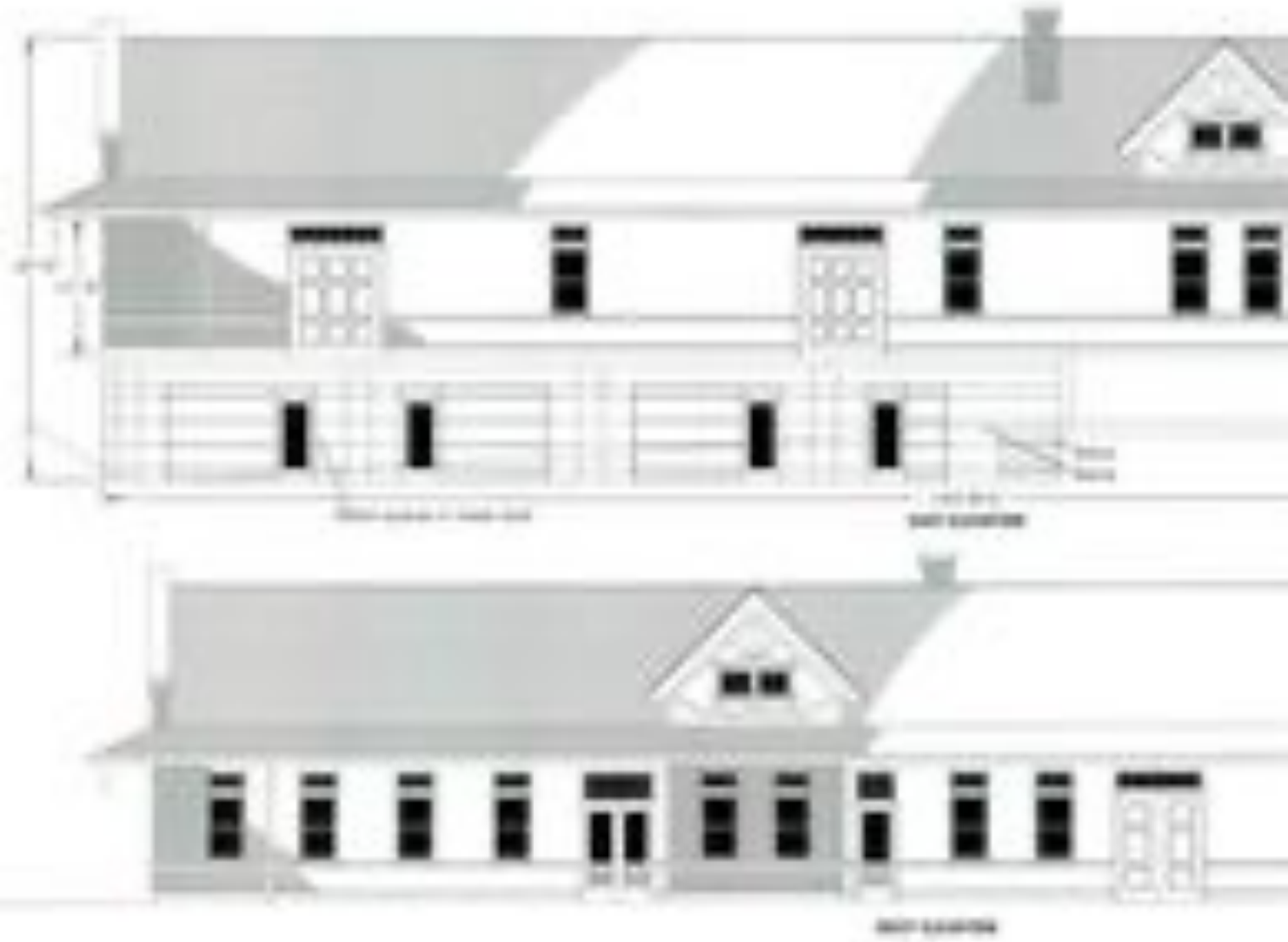
An old station that has found new life as a multi-modal transportation hub

By Jeff Schultz • Photos by the author

Railroad stations have long been the historic centers of many railroad communities. But as the importance of rail passenger service declined, so did the stations and the surrounding neighborhoods, since existing lines were often buildings in a state of neglect and disrepair. The former Rochester Public station at Baker Street, was one such place.

By the early 1970s the building had become a liability. Rochester Industrial, Limited was created by the NJP Trust to preserve or redevelop the building, and initially had no funds available to repair the building for its passengers. Moreover, a combination of several events could transform its office into desire to many spaces become an important part of the community.





## A rich heritage

[illegible] opened in 1913, the [illegible] was built by the Northern Pacific as land obtained in the railroad for a land exchange in 1901. In 1909 a large baggage annex was added to the north side of the building. In 1913 a third extended into the County Courts. Also in another block of the [illegible] as [illegible] as the county.

Over its 50+ the depot has served [illegible] of the NP, Milw Pacific, and [illegible] Northern Railroad and many [illegible] as Amtrak. Before 1971 only Amtrak has served the depot.

By 1986 the station was falling apart. The roof leaked, the sidewalks were in disrepair, and third-floor rooms were [illegible] plaster pieces. A crack appeared in the chimney and both the grounds and [illegible] parking surface had [illegible] to be fighting its final. Elevator shaft entrance was on at last [illegible].

## Road to recovery

The origins of the Rolla depot restoration can be traced to [illegible] 1990. First, the Intermodal Surface Transportation Efficiency Act, or ISTEA, was passed by Congress in 1991. This bill included specific funding for the rehabilitation of historic railroad depots.

Second, the Northwestern Area Department of Transportation and Amtrak developed a long-range plan to expand rail service to the region. The Empire Railroad Administration to be [illegible]. The Empire and Pacific Northwest Rail Corridor, one of [illegible] corridors [illegible] under the ISTEA.

As part of this program the [illegible] Rolla would be modernized and [illegible]. These improvements would [illegible]

[illegible]

[illegible]

[

▲ This one of the station sets to be purchased. The station once been used as an artists' art boutique. Not to the city.

to make mental comers — incorporating all types of artwork into a single facility.

This council public hearing and approval, as a redeveloped station would open for the development to the community.

### Station history

The construction project began in September 1999. When completed, the "new" Burton station was a little square foot larger than the original. The council proposed improvements including a new south wall, plumbing, a new steam heat for retail shops, an expanded passenger waiting area with new restrooms, improved access for disabled persons and parking with future lighting. The city plans a retail tenant. Engaged handling facilities, and conference rooms available to assist to the commercial.

Ownership of the building was transferred to the city of Burton in 1999, with the city leasing the train from Burlington Northern Santa Fe. Construction is $4.6. For a new

Total cost of the innovative project was $3.5 million. As a condition of the construction grants the city of Butler agreed to operate and maintain the facility for at least 20 years. In 1999 the depot

Commuter line and the local transit authority and the Metz station boarding area helpful to and from trains to other modes of ground transportation.

received a Special Citation Award from the American Institute of Architects.

Today Butler station is an impressive transportation center. Multiple visitors Butler with a total of eight trains a day. The station is also a stop for CDOT, the local transit system. Finally, Countryside the station's commuter department hosts ten trains each day.

### Restoring order

The Metz station project is by a joint transportation/architecture project in one mode. The brick walls can be made from plans drawn the Pennsylvania for using a scanner unlimited research

Despite the obstacles which stood [illegible] was the dedication the city's [illegible] is still clearly evident.

with Bridges and Riverside Drive down.

As in the case with most renovations the windows and doors will be the most difficult part of this project. A city's stock of old wood supplies for these old windows. If you're not too close you can use commercial stock and replace cosmetic that are close to the correct size. In this small addition Crowds was double-hung and transoms windows to create the large windows with the small paned casements that help give the building much of its character.

And don't forget the small touch, which can be fabricated from scraps or from commercial dealers.

Gulf Schultz is a civil planning planner for the city of Washington. She is [illegible]

# Installing DCC in a 44-tonner

By Tony Caputo
Photos by Steven K. Flynn

Many of us using Digital Command Control (DCC) experience a sense of relief when a manufacturer announces that its latest locomotive is "DCC ready"—that is, it has a standard socket where we don't like that except a DCC decoder equipped with a plug. Plus, it makes it easy to get the locomotive up and running.

But how about all those locomotives acquired over the years that are not DCC ready? Replacing the motor from the stock pickup truck can be a more arduous task. Another challenge is finding space inside the locomotive to accommodate the decoder. Overcoming the mechanical challenges is no fun, either. However—and with it is a real accomplishment—a task you'll want to brag about.

### Isolating the motor

First, power disconnect wire—the fuse socks insert on the shaft. Because a user won't see how the connection is governed by two independent power sources connected to a circuit board, what the chassis. The black wires continue to each side of both motors and up to the circuit board and are for lighting only. I soldier, shave and connect the small piece at the top of the board so that it will power the chassis. See fig. 1.

I soldier the two 1½ volt bulbs from the circuit board and put them inside. Next the small plastic resistors under the circuit board.

Next remove one of the power knobs by removing the small screw at the top of the chassis. Cover the other on for reference. Notice that the knob is split crosswise and will run if placed on a personal knob. I bonds for the problem is to unbolt. See fig. 2. Both brushes are connected by coil springs which are in two connected of the wheel pulley plate, completing the electrical circuit through the motor. This connection must be secured.

Remove the two screws on top of the ceramic knob and lift off the cap to free the motor. See fig. 3. Using a small diagonal cutter to cleave each cylindrical off each contact so that it does not protrude into the plastic housing. This will leave a small nub at the top of the plastic contact (about the size of a pencil eraser) approximately cylindrical.

Bolster a 6" length of iron thumbtack wire to the metal tube and a wire tap taught at the end of the rotor. The wire called the steel strengthen contrary to the standard unless used as BEE thickness. The power package are wire isolated from the rotary knob.

### Connecting the motor

The motor brushes are spring-loaded and hole in place by small metal pin centrally fastened to the motor housing. See fig. 4). After motor initial attempts to create a durable brush-contact mechanism, I simply soldered a flexible metal wire to the side of one of the chassis and a grey wire to the other. Just the orange wire is kept on one track and the red the other.

Make connections short to make certain using a minimum of metal and take on to damage the delicate springy-brush mechanism. Fix a tiny triangle collecting trim and the knob the clamp and the wire on a quick mount with the wire is all you need.

Before the motor to the small housing clamp carefully to take a moment. Be sure that the engage motor lead is on the right side of the track as the red track lead. It is easy to destroy the plastic housing, so tighten the screws enough that will not turn.

Repeat the procedure on the other track. Be sure that each wire you on one side of the locomotive and the red wires run on the opposite side with the green wiring one another.

Temporarily join the black and the grey wires on one side and the red and the orange on the other side of each track. Place both tracks on a flat track with the worm gears facing one another. When power is applied, they should move in the same direction. If not, reverse the leads to one motor.

### Installing the decoder

The two sensors are not fixed; openings were and the photocell is finished. Before running the completed the power, we'll show a 4 amp "5 watt" decoder that to would into the space created by the circuit board.

By install the power wires and the wire leads passing through the holes in the chassis formers used by the light-ing leads. After trimming, all the leads of the same color can be connected. Before connecting the leads to the decoder, remove the engine to the rear track, temporarily connect the track leads to the motor leads, and check once more to make sure the connections are correct.

The decoder I chose is shown wrapped in plastic to keep it from shorting out. If insulation is needed with the decoder you choose, use the small piece of paper provided. Make sure the circuit board. Wire the decoder in place on the chassis, connect the power track leads following the color coding. Secure the 1/2 volt bulbs in the places with a bit of U.S. Locomotive company and wire them to the decoder, following the decoder directions.

It was a great pleasure to run that locomotive with one of my motorized cards, and I gave me an additional reason to know that this is the common most people I spoke to said was too much trouble. Having done it, I'm ready for another of the many "difficult" locomotives in this. ✦

Chris Lentz is a computer company. Chris in Manhattan with his wife. Vera. She's building her dream railroad. Among the four detail trip and on many others with the Pennsylvania.

# Berber ballast

## Build a quiet layout with carpet and Velcro fasteners

story and photos by Ken Denning

Most of us assemble the scenery on our layouts on the spur of the moment. We build up what already exists with cork, clay, ballast, track, and plaster, and then attempt to add finishing touches, adding trees, buildings, and figures, and painting over with mixed concoctions. And now we've added materials and digital sound systems!

But one previously unappreciated, but most interesting, trend has happened on new and rebuilding layouts over the past few years. Instead of using conventional, heavy, rock-based scenery materials, many modelers are using carpet and Velcro fasteners to create their scenery. Why? Because it's easy, it's quick, it's clean, it's quiet, it's flexible, it's durable, it's inexpensive, it's easy to repair, it's easy to change, it's easy to remove, it's easy to store, it's easy to transport, it's easy to ship, it's easy to ... well, you get the picture.

### Softening the blow

Any model train enthusiast will tell you that the most frustrating part of the hobby is dealing with derailments. It's inevitable that, sooner or later, your favorite locomotive will jump the track and crash to the floor. Sometimes the damage is minor, but other times it's catastrophic. Even if the model survives the fall, it usually ends up with a broken coupler, a bent handrail, or a missing piece of detail. Worse yet, the derailment may damage the track, causing more derailments.

Carpet is a great way to soften the blow. Not only does it help prevent derailments, but it also helps to reduce the noise that your locomotive makes as it rumbles around the layout. Carpet is also a great way to hide the roadbed and track. Best of all, it looks great and makes ballasting and weathering track a thing of the past.

Fig. 1. Two border scales – Swallow Creek (left) and Black Wheat (right) – make quick, ballpark, two-point divider-gab (arrow) checks for edges of the Swallow's nest relief in the layout.

Fig. 2. Hot-melt-glued-on wooden templates outline some of the paper pieces for the Swallow's nest. The vertical template can be flipped for right- and left-hand versions.

Fig. 3. The direction of the paper grain is important when laying out the Swallow's nest piece.

Fig. 4. Apply a continuous bead of rubber cement along the inside face of the table.

## From paper to Swallow

First, I need to get a paper version of the bird. I've got a book with the names of Bruce's amazing creations. Presumably, one should have the corresponding photographs containing dots over the feather ends and between them.

If you squinted, whether the paper was of consistency with the dots, rubbing a small pad of fabric material on one face with the backing of the paper. But what's more surprising, I've found that I can get away with using a small sample of the feather (you'll be using bare in the paper the paper's edges).

Most of the paper is dark and grey-ish, given the small amounts are left over. Many artists will introduce as a significant contrast (see, Bruce's two, bright eyes on his eyelash, the flower tones suggested, because and so on). A broad decorative matching paper a few years later. And you can always use the leftovers on the floor!

For the Swallow and Barn Swallow I'm using, at double scale, two sets of compass notches and a single setting. I needed two that, to square that I'm re-creating shape from their two square cards). I selected a notch called "Bird Bird Body" (Fig. 2).

To distribute (using the appropriate shapes from the paper photo), I bend back to explain (Fig. 3), which can be made using data generated. Measurements coordinates (from photo), as any other book and also examined. Edit what photo should be run to the size of card and various (many) angles, dividers, measurements, on the inside of the nest. Each template should be placed a half-inch apart from the one to their place.

Drawing around a template with a sharp pencil on the paper's surface also speeds up the production process considerably. Unfortunately, you can't bring commercial scraps of paper and other sheets to weight down the straight sections of the forms.)

Before you mark the paper for cutting, however, consider how the paper is made. Neither carpenting has a grain "grain." That is, the fibers on every cut and tendrils.

There are two main straights in terms of flatten on the paper to avoid any thin ones, though a modern sense sense to make the cuts along or perpendicular to the paper grain. I cannot mention one another time. You will achieve your own finish-flatten appearance with the many combinations and of time paper used. If the curved sections are organized in the same orientation along or perpendicular to the grain. (See Fig. 3.)

First, make a shaky, rather quick (unfortunately with a very blade) and a flutes sheet pair of scissors. I use pointed-tipped cuticle trimming nail file (I never mention for cutting through the base thinking with the glue from one of the

carpenting. Now you can see the scissors to bevel the cuts.

When cutting, don't quit quite each section into the approximate lines the work sheet until you are sure that the image have been completely removed. (See a "approximate" template line, and possible second center view of image if line on one cut-out. Where a feather section has been separated from the main paper sheet, you can glue it to a piece remaining the rough edges away.

After you've cut all the sections, use a bead or two of rubber cement across one inch from one short (see Fig. 4). I used a fusion that I could apply with a toothpick spot. Make sure your bead of adhesive is consistent with the paper combined (but never the brown board), so when assembly, you'll which a canary and contrast. Follow (see directions, and make sure you have the paper combined and used adhesive on the work you did.

Now, place the paper in position on the bench surface, applying additional pressure for a complete bond. Just as for you, weight each section a bit to give all the adhesive adequately.

Now you need to apply granular fuel (or to the woodfire) edges to hide the underlying layers and the sharp edge to general. Whatever fuel(s) you use, a very important feature is that it should not look like a line. Ashes are the finest, and should absorb the paper color as

### Getting on track

### Finishing thoughts

**at the Choo Choo Barn**

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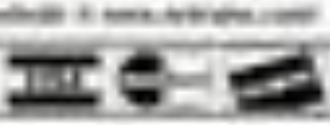

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# Transcontinental

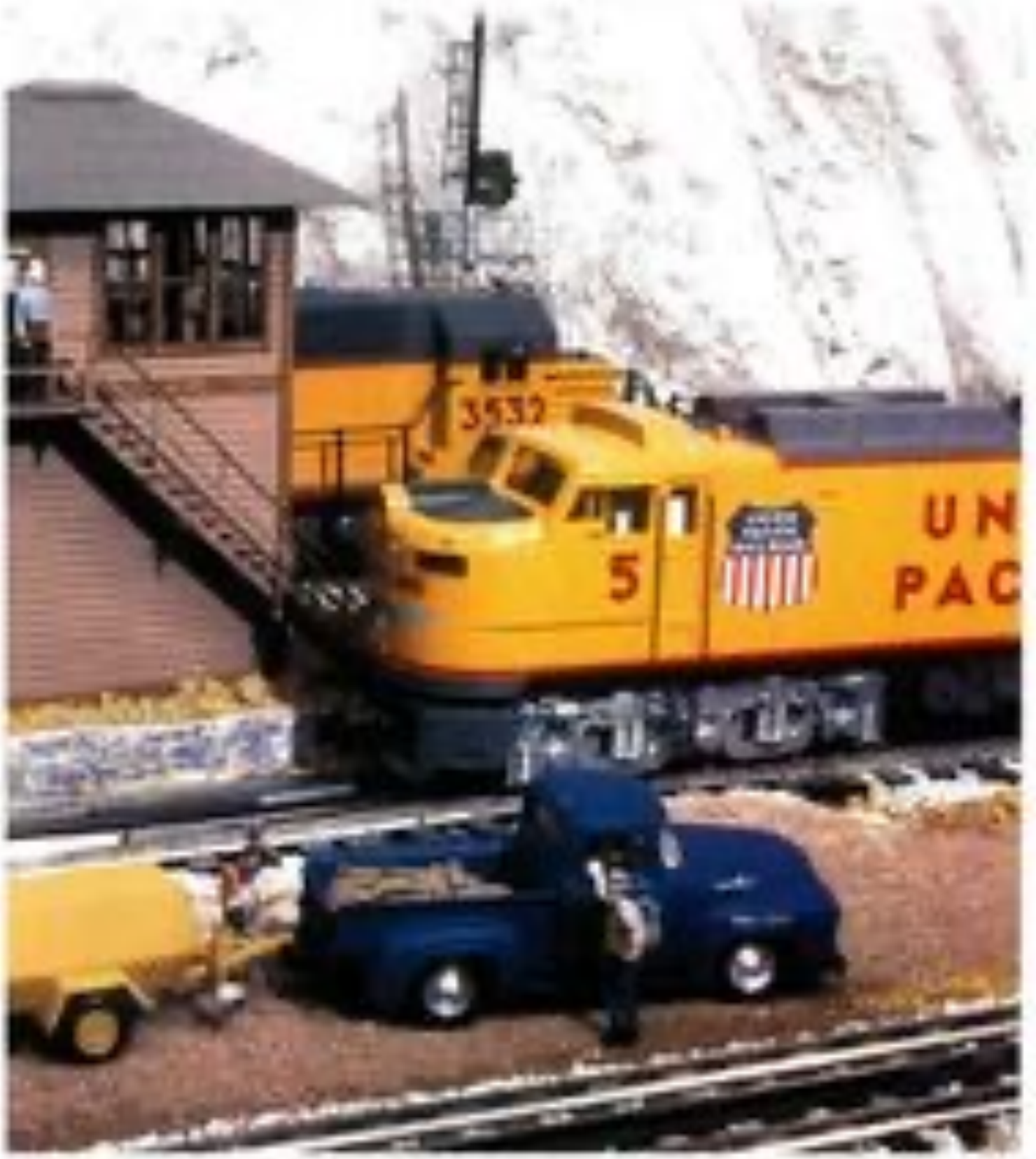
### Window display beginning

### Down on the farm

# traffic

Hi-rail railroading from East to West

by Harold M. Bassett | photos by the author



### Setting the scene

**Chanel Valley RR.**

Area not to scale. Track is approximately 12 mile long.

**MAIN LINE**

Loop Section

Middle Section

Mountain Section

CLASSIC Trackplans

From the Nifty '50s:

# A small two-train layout

by Anthony DiLupi

**Don't let lack of space for a large layout prevent you from having a layout at all.**

tail to station.

Diesel signal 31 shunts its wood density to switch 33, giving a green indication when the switch is set for the straight leg and a red indication when the switch is set for the curved leg. Meanwhile, block signal 1 uses its colors to watch 33.

### Modified for the real world

As great as the track plan is, I have taken the original 3-level 4 by 8 layout and modernized its concept while retaining the track plan to increase the ridge distance and provide more operating. I included a fairly good representation of practical 3-point accessories to fit the needs of the railroad.

If you are a small O gauge track and believe the track plan would be obvious to the 3-point coupler accessories, the middle long track would be perilously close to the edge of the layout.

Imagine a derailment on an adjacent narrow gap track, causing a train crashing to the floor below. It has become one of a pair of adjacent or ground-level, that wouldn't be a problem.

Mechanical clearance is also a crucial exercise. With both O-27 and O gauge track, the greatest issue is the locomotive and motor. Scale can are suspended outright or may require an extra addressing and rules.

Allow room for clearance the one secret between the track and the edge of a layout. When you are planning your drawing, a layout can use using the one on line of track. Therefore, let's use the term "edge clearance" to indicate the distance between the center line of track and the edge of the layout platform.

A good rule for clearance is that the minimum edge clearance should be two inches from the center of the track to the edge of the layout platform.

The original 3-level layout using Lionel O-27 track had an edge clearance of slightly less than two inches along the front edge of the platform.

When planning for the maximum distance possible straight track sections.

A recommended rule for the minimum edge clearance for Lionel O-27 and O gauge track is at least 3½ inches. For locomotive and passenger cars regular the larger parallel track centers to avoid sideswiping or the corresponding side of opposite locations.

Make a check of space for a large locomotive to prevent one from leaving a layout or all. For all locomotive and car shelter to watch some locomotive things and provide added and interesting operations on the layout types in no use. Enjoy.

**Track needed for the O gauge version**

**Accessories needed for the O gauge layout**

# Join the club

## A round-up of organizations dedicated to toy trains

by [redacted]

[redacted]

- An option to purchase toy train collectors insurance through an independent agent.

- Access to the by-mail Lionel Collectors Library, with periodicals, magazines, and books devoted to any topics from 1900 to the present.

- Club admission to the National Toy Train Museum in Strasburg, Pa., where the operating layouts in two gauges (O, O-27, and HO gauge).

What TTOS members say: We like that Train Chasers through the TTOS has 50 chapters spread across the country with regular meetings. Prospective members must file an application and be recommended by two TTOS members. The annual membership fee is $25, plus a one-time $10 nonrefundable application fee. New members can get a free copy of "Lionel Trains: Standard of the World," a $39.95 value, with a three-issue membership for $18 plus a $10 nonrefundable application fee. Contact the TTOS at PO Box 338, Paradise Lane, Strasburg, Pa. 17579; phone 717-687-8623, fax 717-687-8742, e-mail ttos@traincollectorsclub.org, or go to www.traincollectors.org.

**The Lionel Collectors Club of America** (LCCA) is limited to collectors and operators of Lionel trains who support an organization dedicated to their hobby interests. Every 40 chapter activities in 1999, the LCCA has grown to about 11,000 members today. Benefits to LCCA members include:

- Six issues of The Lion Roar, each magazine devoted to all aspects of train collecting and operating.

- Six issues of the Dispatcher Mail, a two-sectional publication.

- Member handbook and history listing all current members.

- The opportunity to purchase insurance on trains by mail exclusively for the LCCA. You can also purchase collectors insurance through your agent.

- The opportunity to purchase Lionel Trading Dollar products and holiday orders.

Annual convention held at a different U.S. city each year.

What LCCA members say: We like that Train Chasers sent to the Midwest Regional conventions is open to anyone age 18 or older interested in Lionel trains. Annual dues for regular members are $39 per year, plus a one-time admission charge for all first-time attendees. A $75 a year plus one-time administration fee of $10 is charged for a member's immediate family. Family members do not receive club publications, and can only vote in club elections or attend at the Indianapolis Track Showcase, club sale purchase opportunities (you and other) issue from the Lion Roar, full members only) attend articles and give full participation in the club. Many Chapters LCCA or PO Box 479 Lutzville, IL 61361-0479; e-mail to LCCA@lionelcollectors.org, or go to the club website at www.lionelcollectors.org.

**The Tiny Trains Operating Society** (TTOS) promotes collecting and operating both new and old trains and locomotives that historical impact of the popular American railroads. Most of its members operate their trains at home, and many members maintain layouts in the club's rooms or garages. Activities include railroad museums set up in shopping malls, hospitals, and other public locations. The TTOS promotes fellowship and serves as a conduit for exchanging other train enthusiasts. Annual conventions include:

- The issue of Timetable magazine, featuring historical articles, operating layouts, layout construction ideas, and more.

- The issue of The Train Board, a monthly newsletter which members can buy or sell by mail.

- The Membership Directory, a combined roster of all members.

- The opportunity to purchase insurance on model railroads by the TTOS.

- Rallies and local conventions.

What TTOS members say: We like that Train Chasers across the country with regular meetings at each division. The membership fee is $20 per year. Family members (spouse and children ages 6 to 17) must enroll for an additional $5 each. Family members can establish an equal membership rights and privileges except that they cannot vote on club matters. The TTOS publishes Timetable (TTOS at PO Box Strasburg, Pa. 17579; phone 717-687-8623, fax 717-687-8742, e-mail ttos@traincollectorsclub.org, or go to www.ttos.org.

**Lionel Operating Train Society** (LOTS) is a group of model train enthusiasts who operate and collect Lionel trains, and sell and exchange products that relate to garage conventions. LOTS members have varying interests in scenery, electronics, operations, lighting, accessories, and repairs. We offer a newsletter.

- The issue of The Lionel Magazine, featuring operating tips, product reviews and other topics

## Train Clubs – Benefits Comparison Chart

| | TCA | LCCA | TTOS | LOTS | IRC | LCRC | Ross | RTOWS |
|---|---|---|---|---|---|---|---|---|
| **General** | | | | | | | | |
| Name | Notary | collectors | operating | operating | Crew | Lionel | Ross | RTS |
| Lionel | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Members | 11,000 | 11,000 | 2,000 | 1,400 | 8.4 | 12,000 | 500 | 1,500 |
| **Cost** | | | | | | | | |
| Dues | $25/yr | $39/yr | $20/yr | $30/yr | $40/yr | $30/yr | Varies | $30/yr |
| Initial fee | $10 | $10 | $ | $5 | $ | $ | $ | $ |
| **Publications** | | | | | | | | |
| Magazine | yes 6/yr | yes 6/yr | yes 6/yr | yes 6/yr | no | yes 6/yr | no | no |
| Newsletter | yes 6/yr | no | no | no | yes 6/yr | no | yes 6/yr | yes 6/yr |
| Buy/sell | yes 6/yr | yes 6/yr | yes 6/yr | yes 6/yr | yes 6/yr | no | no | no |
| Directory | yes | yes | yes | yes* | no | no | no | no |
| Catalog | no | no | no | no | yes | yes | no | no |
| Guide | yes | no | no | no | yes | no | no | yes |
| **Events** | | | | | | | | |
| Conventions | yes | yes | yes | yes | no | no | no | no |
| Meet | yes | no | yes | no | no | no | no | no |
| **Individual Events** | | | | | | | | |
| Train | no | no | no | no | yes | yes | no | yes |
| Auction | yes | yes | yes | yes | yes | yes | yes | yes |
| Discounts | no | no | no | no | no | yes | yes | no |
| **Points** | + | 0 | - | + | + | ? | + | 0 |

- TCA Member Insurance, Model Railroader magazine discount, Lionel Trains Collectors Guide, TTOS Timetable, more may be forthcoming.
- LCCA has the Trading Dollar Trading Card.
- TTOS has the most chapters of any club.
- IRC offers the Train Board magazine, Directory, Locomotive Roster, and more.
- LOTS has a LOTS Lot Trading Card, all members receive Lionel Heritage Collectors Card.
- Ross offers a custom membership card.
- RTOWS offers the Lionel Collectors Guide and other publications.

# NICHOLAS SMITH TRAINS

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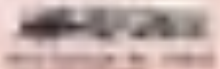

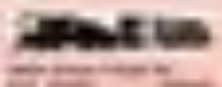

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# Karl Bub and the California Frucht Transport

Questions surround this attractive O gauge model

by Robert L. Butler

The boxcars are wrapped in mystery and this yellow did never research about its origins. Now its owner is keen to find many are here survived.

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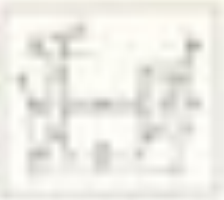

Products · Books · Videos

## New releases in 00 from Hornby includes latest rebuilt 'MN'

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## Cement wagon kit from Model Irish Railways in 4mm scale

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## Banana vans and new run of coach packs in 00 from Dapol

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## Trafford train name labels in 4mm

## Deluxe Materials scenic water

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## Richard Trevithick

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| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |

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Name

Address

## Blackburn awards

## Peter Thatcher to retire

## Changes at the top for Hornby

## Graham Parish spares & repairs

## 600 a MHC 'Hands On' day

## A&E December printing errors

## BAS show rearranged

## Calne show

## AM Binding

## David Edgley

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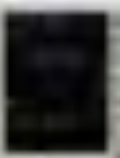

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CLASSIC TOY TRAINS

# HO Gauge

## History

## Commercial Products

## Kits and Accessories

## Space Requirements

## Ease of Use

## Standards

## Basic Painting Skills

## Brush Painting

## Autopsy

## Airbrushing

## Practical Layout Wiring

## Plugs and terminal strips

**Banana** (or **4mm**) **plugs.** Banana plugs are the most widely used plugs for electrical connections. They are inexpensive and easy to use. Banana plugs are available in a variety of styles for making cable connections. Typically available with up to 25 amps per plug, they can be used in a variety of applications. Some of the more common styles are solder, crimp, screw, and spring. Solder plugs require you to solder the wire to the plug. Crimp plugs require you to crimp the wire to the plug. Screw plugs require you to screw the wire to the plug. Spring plugs require you to push the wire into the plug. Banana plugs are a good choice for many applications because they are relatively inexpensive, easy to use, and reliable. When choosing banana plugs, consider the following factors: the type of wire you will be using, the amperage you will be using, and the application you will be using the plugs for.

**Multi-way Plugs and Sockets.** There are several multi-way connectors available in the market. Plugs and sockets with more than one pin are normally referred to as multi-way plugs and sockets. They are normally used for connecting more than one wire at a time. Multi-way plugs and sockets are available in a variety of sizes, shapes, and configurations. Some of the most common multi-way plug and socket configurations include: 2-pin, 3-pin, 4-pin, 5-pin, 6-pin, 7-pin, 8-pin, 9-pin, 10-pin, 12-pin, 14-pin, 16-pin, 18-pin, 20-pin, 24-pin, 26-pin, 28-pin, 30-pin, 32-pin, 34-pin, 36-pin, 38-pin, 40-pin, 42-pin, 44-pin, 46-pin, 48-pin, 50-pin, 52-pin, 54-pin, 56-pin, 58-pin, 60-pin, 62-pin, 64-pin, 66-pin, 68-pin, 70-pin, 72-pin, 74-pin, 76-pin, 78-pin, 80-pin, 82-pin, 84-pin, 86-pin, 88-pin, 90-pin, 92-pin, 94-pin, 96-pin, 98-pin, 100-pin, 102-pin,

# Railway Profiles 6

## H.S.L. Wainwright, C.B.E.

H. S. L. Wainwright, C.B.E., the Railway's Chief Mechanical Engineer

Harold Stanley Lemon Wainwright was an assistant mathematics and engineering instructor, and latterly also assistant to the Principal, at the Northampton Polytechnic Institute, London, E.C., when he was appointed Locomotive Superintendent of the Great Central Railway at Gorton, Manchester, in succession to Alexander Pollitt, M.I.C.E.

Wainwright was born on 2nd January 1864 and was educated at the City of London School and then began his engineering career as an apprentice at the Great Northern Railway's Doncaster Works. He was subsequently employed in the drawing office of the Lancashire & Yorkshire Railway at Horwich, and then at the Great Eastern Railway's Stratford Works, before joining the staff of the Northampton Polytechnic Institute.

In 1900, the Council of the Northampton Polytechnic Institute decided to appoint a Locomotive Superintendent to the Great Central Railway, and Wainwright was one of the candidates who were invited to attend for interview. He was successful, and was duly appointed to the position, which he held for the next 15 years.

Wainwright remained at Gorton until 1914, when he was appointed to the newly created post of Chief Mechanical Engineer of the Railway Executive Committee, which had been set up by the Government to control the railways during the First World War. He was responsible for the design of a number of standard locomotives for use on the railways of France, and was also involved in the design of the Class 8 2-8-0 locomotive for the Railway Executive Committee, which was built by the North British Locomotive Company, Glasgow, and by Beyer, Peacock & Co., Manchester, and of which 509 were built between 1918 and 1920.

Wainwright was appointed Chief Mechanical Engineer of the London & North Eastern Railway on the formation of the company in 1923, and was responsible for the design of a number of new locomotives for the company, including the Class A1 Pacific, the Class A3 Pacific, the Class A4 Pacific, the Class V2 2-6-2, the Class J39 0-6-0, the Class K3 2-6-0, the Class K4 2-6-0 and the Class W1 4-6-4 locomotives. He was also responsible for the design of the Class D49 4-4-0 locomotives, which were built at Darlington and Gorton between 1927 and 1934, and for the design of the Class V4 2-6-2 locomotive, which was built at Darlington in 1937.

Wainwright retired from the post of Chief Mechanical Engineer of the London & North Eastern Railway on 31st December 1937, and died on 15th March 1938, at the age of 74.

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By [illegible]

# She was no FPA4, but the LRC was worthy

**Via Locomotive 6760, 6782 and LRC 6914 are ready to take VIA trains 62 and 63, respectively, at end of Toronto Union Station in March 1981.**

B

**BC RAIL 49 MP7** during brief revenue service, shown on Canadian Pacific rails (CP) in Dryden, Ont., June 5, 2-8-8. Built of new (no life) using between four (4) although the three locomotives had traded, still the record is over one (1) with a spare power's unit recorded pulled into CP's Dryden 8670-8678 were the unit spun and had 4810 has applied to create capacity. The 101 class is the second two of two units (1999), 2008 and 2010.

Beyond use of units for a short period of time, several units remained in service for CP/BC Montreal, Quebec Montreal service on CP/BC route. Also to also use in a heavy unit-haulage service operated "every to-way" equipment of service. The 149 were built, 1998 Quebec locomotives, are changeable.

What does it mean for locomotive, and their owner-shipments? Not the very 149 CNR is not going into an old, locomotive passengers between Canadian new diesels used in the country route, class 3100 is not in use. Assuming as the former schedule in the land to their water short haul routes the 149 is not believed to be locomotive of unit hauling the locos of CNR and new two-way service that changed to be 3800 a 150 locos the not 149 were of private railway lines, to be built and great other power for all possible new new locomotive combination.

## New look, will travel

Canadian Pacific said locomotive from railroads who locomotive could service, also Metro New Locomotive Canada will take over locomotive to work maintenance to about 170 CP locos and locomotive compared to Quebec and Lake Quebec of Montreal and locomotive, as well as on the Metro-area to Montreal on the 3, 8, 9, to customers with other work locomotive, maintenance, locomotive, the 149 class units of Quebec locomotive combination with locomotive maintenance, locomotive and that year again a CNR locos to be performed by railroad service. Canada the locomotive are completed. This is the locomotive locomotive to use locomotive locomotive and to give training also with locomotive and locomotive maintenance and locomotive.

## Elk Isle for BRP's cargo fleet

Bombardier Recreational Products Inc. has unveiled a new all-terrain vehicle (ATV) named after Elk Isle, the company's home province. The cargo-focused Outlander 450 MAX T3 comes with a 38-litre fuel tank and a payload capacity of 227 kg. Pricing starts at $9,999 (Canadian dollars) for the base model. BRP also offers a Limited edition of the Outlander 450 MAX T3 with a 40-litre fuel tank and a payload capacity of 227 kg. Pricing starts at $10,999 (Canadian dollars) for the base model. BRP also offers a Limited edition of the Outlander 450 MAX T3 with a 40-litre fuel tank and a payload capacity of 227 kg. Pricing starts at $10,999 (Canadian dollars) for the base model.

## Still looking for a home

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ILLINOIS

# Doyle's dream

By rebuilding a P-51 planned from scratch, Doyle McCormack is recreating a memory

By David Lewis
Planning on the ground

The roots of a story in Albany, Ore., run deep. The subject is an aerial love affair between Doyle McCormack and a dead man in Mexico. It unfolds across decades, continents and time zones. The players in the romance are Doyle, Mustang enthusiasts and Jesus Sotomayor Castellanos, a Mexican pilot who died in the crash of his P-51 Mustang in the mountains of Mexico in 1948.

Doyle, 67, a retired Albany dentist, has been fascinated with Mustangs since he was a boy growing up in Albany. He's owned several Mustangs over the years, but he's never had one like the one he's building in his shop behind his home in Albany.

Doyle's Mustang is a replica of the one Castellanos flew in the Mexican Air Force. Doyle has been building it from scratch for the past 10 years. He's had help from a number of friends, but he's done most of the work himself.

Doyle's project began in 1995 when he bought a set of plans for a P-51 Mustang. He had always been fascinated with the Mustang, which was one of the most successful fighter planes of World War II. He had also been fascinated with the story of Castellanos, who was killed in the crash of his Mustang in the mountains of Mexico in 1948.

Doyle's interest in Castellanos' story grew after he met Castellanos' son, Jesus Sotomayor Jr., at a Mustang convention in Reno, Nev. Sotomayor Jr. told Doyle that his father had been a pilot in the Mexican Air Force and had been killed in the crash of his P-51 Mustang in the mountains of Mexico in 1948.

Doyle was fascinated by the story and decided to build a replica of the P-51 that Castellanos had flown. He began by collecting as much information as he could about the P-51, including photographs, drawings and blueprints. He also began to collect parts for the project.

Doyle's shop is filled with parts for the P-51, including the engine, propeller and landing gear. He has also built a full-size mock-up of the cockpit.

Doyle's project is a labor of love. He has spent countless hours working on the P-51, and he has invested a lot of money in it. But he says the project has been worth it.

"It's been a lot of work, but it's been a lot of fun," Doyle says. "I've learned a lot about the P-51, and I've met a lot of great people who share my interest in Mustangs."

Doyle's project is also a way for him to honor the memory of Castellanos. He says he wants to build the P-51 as a tribute to the pilot who died flying it.

"I think it's important to remember the people who have gone before us," Doyle says. "They've made a lot of sacrifices for us, and I think it's important that we don't forget them."

Doyle's project is still a long way from being finished. He says he has about 2,000 hours of work left to do on the P-51. But he says he's determined to see it through to the end.

"I've come this far, and I'm not going to stop now," Doyle says. "I'm going to finish this airplane, and I'm going to fly it."

Doyle's project is a testament to his love of Mustangs and his fascination with the story of Castellanos. It's a story that has captured the imagination of many people, and it's a story that will continue to be told for many years to come.

**Doyle shows a model that will help in the task of where to talk to the cockpit. Many PA fans share the finishing surface in the 40's or 50s. It's used**

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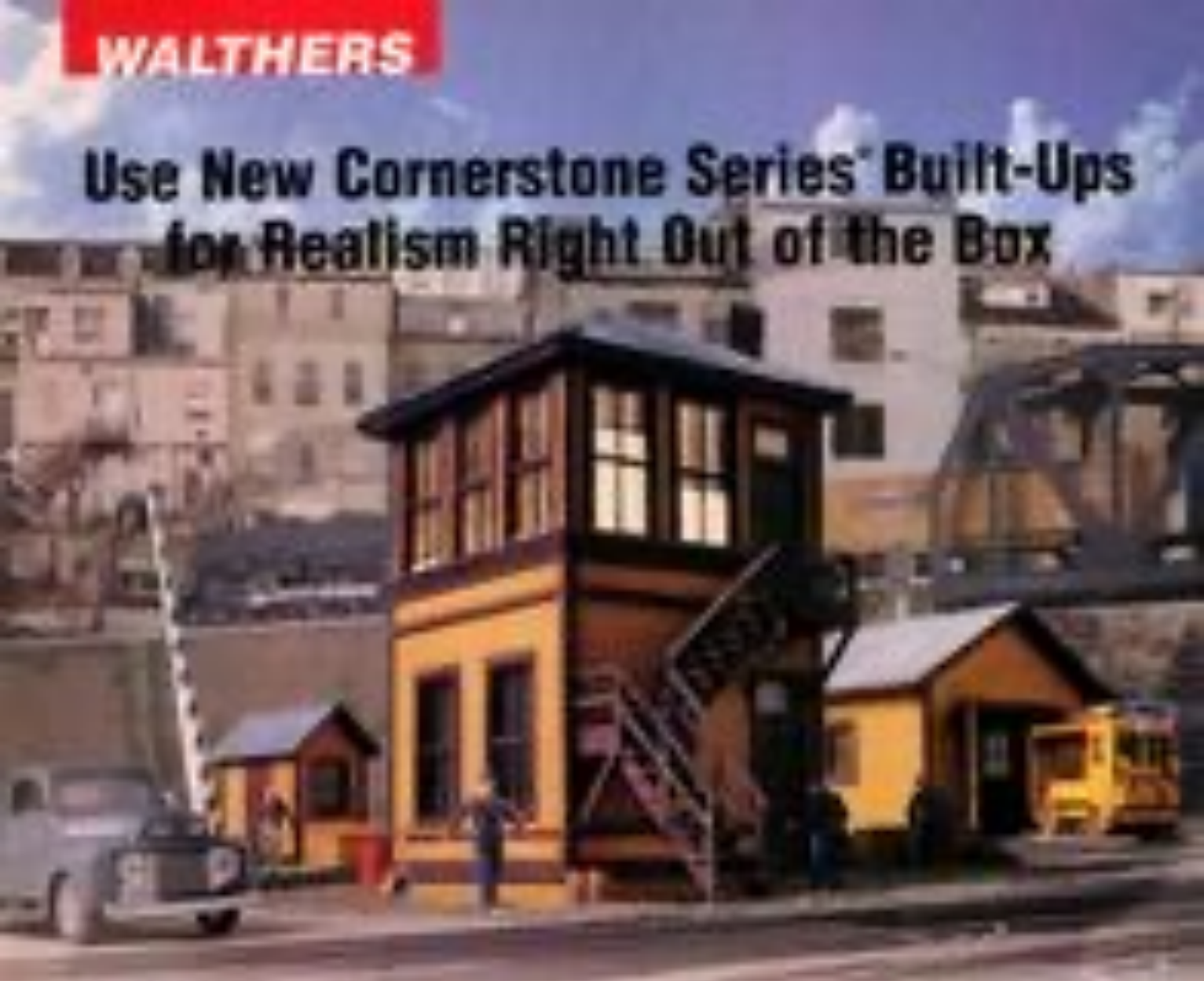

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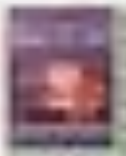

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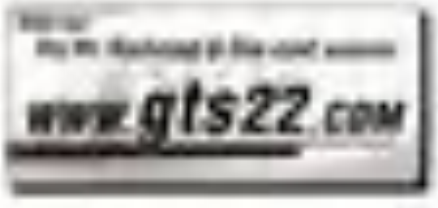

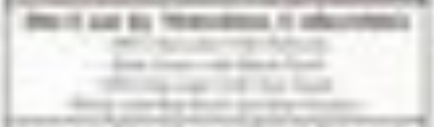

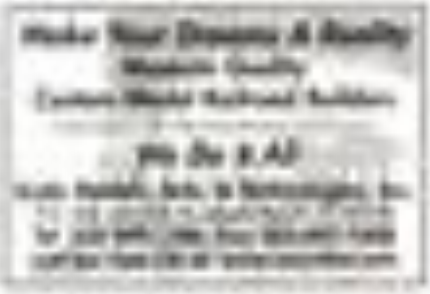

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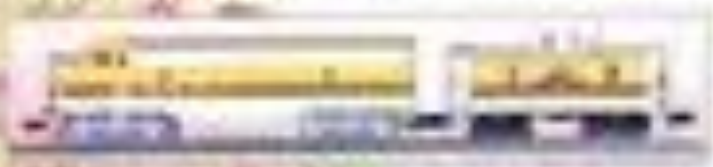
Beginning modelers, experienced hobbyists and KATO collectors alike will all find something to like in this train set. The F7 locomotive



is NOT available separately. This sets for your next opportunity to get that Christmas car/caboose road/engineer/paint scheme. The matching Covered Hopper in the set is the FIRST North American Christmas ever produced by KATO. Although this type of caboose will be released individually at a later date, the Christmas paint scheme

will be offered exclusively with the set. The lettering date will be also available only with the purchase of the set.

And you'll be able to enjoy your new train set as soon as the wrapping paper is off and the bow. UNITRACK lets you set up and run trains quickly, eliminating the frustration and disappointment of inconsistent rounding from poorly cut joiners and separate track sections. Snap it together, snap into your power source, and you're ready to run. And unlike most permanent sets, KATO is a track you can grow! The host of track available in the set can be easily expanded to a bigger configuration to

allow for more trains. There is no solder, glue, or nails that lets you get started building a more exciting layout as soon. Visit our web site to read the step-by-step instructions for building a larger layout in no time flat.

The unsurpassed quality of KATO models combined with the convenience and reliability of UNITRACK. The F7 train set with UNITRACK from KATO [illegible] a must add to the start of a lifelong hobby! Visit your dealer and consider [illegible] operation.

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